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AND

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To the Editor of the New-York Farmer.

SIR,

I have been favoured by Robert White Esq. Cashier of the Manhattan Company, with a very interesting book, of which I furnish you a concise abstract for insertion, if you think it worthy of a place in your valuable work. I have added to the abstract, some facts and considerations relative to the supply of New-York city with water, which I also offer for a place in your Repository.

Yours, with great esteem and regard,

SAMUEL L. MITCHILL.

ART. CIV.—*On the supply of water to the Cities of London and New-York.* By S. L. Mitchill M. D.

Long and reiterated complaints had been made by the inhabitants of London, in relation to the quantity and quality of the water with which they were furnished. In April 1827, a numerous and respectable petition was prepared, and presented to parliament, praying for relief from the greviances they suffered.—It was however offered so late in the session, that, the two houses being on the point of adjourning, it could not be legislatively acted upon, at that time. But both the Lords and Commons voted an address to the King, requesting a commission to be issued by him, for inquiring into the subject. Whereupon his majesty George IV by his special writ, appointed Peter Roget M. D. William Thomas Brande Esq. and Thomas Telford Esq., commissioners with full power to make the necessary inquiries, and report thereon. The principal objects of investigation, were the description, quantity, and salubrity of the fluid supplied by the several Water-Companies.

There are eight of these water companies.

Five are on the North side of the River Thames, namely;

1. The New-River;
2. The East-London:
3. The West-Middlesex:
4. The Chelsea:
5. The Grand Junction:

and three are situate on the south side, to wit;

6. The Lambeth:
7. The South London, and
8. The Southwark Water-Works.

It is stated that the principle under which the several Companies were incorporated by acts of Parliament, was to encourage competition, upon the conviction that it was only from competition, that perfect security could be had for a good, cheap, and plentiful supply. But that nevertheless, by an arrangement entered into about the year 1817, among the companies supplying the metropolis with water, all competition was terminated, and a monopoly of this necessary of life virtually established. This was effected by parcelling the city into districts, each of which should be supplied by the company allotted to it without the interference of any other.

The petitioners state that the water taken up from the Thames at Chelsea, being charged with the contents of the common sewers, the drainings from dung-hills and lay-stalls, the refuse of hospitals, slaughter-houses, colour, lead, and soap-works, drug-mills and manufactories, and with all sorts of decomposed animal and vegetable substances, rendering the said water offensive and destructive to health, ought no longer to be derived by the water-companies from so foul a source. As it approaches London Bridge, it becomes tainted with the discharges of one hundred and thirty public and common sewers, with all their nasty and putrid drainings. The confederation was formed chiefly among the five first mentioned companies. Of these, West-Middlesex Water-works, those of Chelsea, and the Grand Junction, derive their water directly from the Thames: the East London from the River Lea, which may be considered merely a branch of the Thames. The new River receives its principal fluid from a spring at Chadwell, twenty miles north of London. The Lambeth, South-London, and Southwark works, draw their water direct from the Thames.

From these several sources, the Commissioners observe, that it is obvious the *quantity* of water provided for London and Westminster is abundant. There is indeed much to spare, from necessary demands upon ordinary and extraordinary occasions, which is allowed to run to waste, cleansing the drains of houses and sewers, preventing accumulations of filth, and promoting the general health.

The Commissioners next examine the *quality* and *salubrity* of the water, with which the inhabitants of London are supplied. They begin with the water of the Thames, which constitutes so considerable a part of that which is consumed. They think that the state of the weather will materially affect the purity of the water, immediately derived from the river and subjected to no process of purification, it being sometimes comparatively clean and clear, and at others loaded with various matters in mechanical suspension, rendering it more or less coloured and turbid. In the latter state, when thrown into cisterns, and other receptacles of houses, it is manifestly unfit for immediate use: but after being allowed to rest, it forms a certain quantity of deposit, and thus may become sufficiently clear for ordinary purposes. This deposit is, however, the source of several evils. It renders the cisterns foul; and runs off into those pipes which issue from, or near the bottom of the reservoirs. By the agitation that accompanies each fresh influx of water, this deposit is constantly stired up, and becomes a renewed source of contamination to the whole mass; and although chiefly consisting of earthy substances in a state of minute division, it is apt also to contain such a proportion of organic matters, as will occasion a degree of putrefac-

tion, when collected in any quantity, and especially in warm weather. Of this deposit, more or less is almost always collected, especially when the service is direct from the river; and although some of the companies have reservoirs of such capacity, as to enable them to serve water already partially purified by deposition, the system is still very imperfect, and the water is frequently supplied in a turbid state. In other cases, the companies' reservoirs, however eminently useful in cases of fire, become objectionable in regard to the purity of the water, since the mud accumulates in them, and also proportionately in the main and branch pipes. There are various substances, also combined with the water by chemical solution.

The water of the Grand Junction Company, was so foul, sometimes in summer, that it would not preserve oysters. Formerly, eels would live a long time in the water: but of late years, vast numbers have died when the hatches have been opened in the river. But the eels that die in Thames water, can be kept alive conveniently in the New-river water. These eels are imported from Holland, chiefly Friesland.—The eels on board a smack, coming into this bad water, have all been known to die in one night, and sometimes in a single tide. Flounders die too when the boats conveying them enter the bad water. Twenty or thirty years ago, roach, plaice, smelts, flounders, salmon, shad, gudgeons, dace, dabs, and several other species of fish, were catched in the Thames; but during the last 14 or 15 years, the business has so declined, that the fishermen are selling off their nets and boats. The water of the river is said to be annually becoming more foul.

Nevertheless, this very water, which is so destructive of fish, sustains the life of various other animals, such as worms, and as a witness expressed it, different kinds of animalculæ, another creature inhabits it, very much resembling a shrimp.

Yet eminent Chemists affirm, that the greater part of the impurities are only mechanical suspensions, that may be separated by filtration through sand and charcoal. When these ingredients are separated by this process, the residuary water contains chiefly a small portion of carbonated lime, a smaller quantity of sulphated lime, a still less considerable quantity of the muriates of soda and magnesia, with a few other trifling and unimportant admixtures. The conclusion from which analysis is, that after filtration, the water contains nothing deleterious, or that can be supposed to render it unfit for domestic purposes. The difficulty, however, on the subject of filtration, is that it might not be practicable to provide the quantity for the adequate supply.

With regard to water of which the celebrated London Porter is made, it is roundly asserted that Thames fluid is not employed in its preparation; but that the proprietors of the great breweries have deep and capacious wells of their own, executed at very costly rates, whence their water is drawn on the spot.

The present book is a folio of moderate size, containg the following papers. 1. The King's commission, with certain correspondence between the Commissioners and several great officers of state, on various matters preparatory to entering upon their official functions. 2. An elaborate report from the gentlemen on the subject; to which is annexed a voluminous appendix of 140 pages, containing the examination of more than 70 witnesses; a large body of evidence from water-companies, chemists, plans of remedies, copies of petitions, correspondence with the home department, a very interesting memoir by Mr. Wright, and divers other matters. 3. The report of the select committee to the House of Commons, dated July 19th, 1828, on supplying the metropolis with water: to which is added an appendix of nearly 60 pages, comprehending minutes of the evidence taken during the six days the inquiry lasted.

To the enormous supply from the various sources herein before mentioned, to more than a million of people, for domestic and manufacturing operations, must be added the amount derived from wells, springs, and rivers.

From a review of the information collected during this inquiry, it may safely and consistently be inferred, that the inhabitants of London and environs, have water of an inferior quality than that which the people of New-York city possess.

To procure good water for the citizens, the Common Council adopted measures a short time before the commencement of the revolutionary war. A Steam engine was erected on the west side of what was then called fresh water. The spot was not far from the junction of Franklin and Elm street. The landing of the enemy, and the flight of the inhabitants, led to a suspension of the municipal authorities. The work was abandoned, and finally went to ruin. The bills of credit issued for carrying it on, were never paid, and the undertaking was not renewed, after the restoration of peace.

After a lapse of more than twenty years, the Manhattan Company was incorporated by the State Legislature, for the express purpose of supplying the city with pure and wholesome water. They erected a reservoir fronting on Chamber-street, from which the fluid was distributed through the city in pipes, to all who chose to take it. Those who did not chose to take it, were at liberty to use the common pumps, to collect rain water, and to derive it by means of carts, from several approved sources in the neighbourhood.

Complaints having been made that the business was not duly conducted, another association was formed under the title of the Water-work's company. In a report made by the engineer employed on the occasion, a project was brought forward, for obtaining a copious and excellent supply from ponds and streams in West-Chester county, beyond Harlem river. This huge and imposing scheme, however, was never carried into operation. Difficulties arose concerning the acquisition of title and privileges, and the company dissolved by mutual consent, on a restoration of the stock to the subscribers.

Since that time, to wit, in February 1830, the Common Council again took up the consideration of the subject, and adopted a report, recommending the draft of a bill for enactment by the legislature, empowering that body to introduce into the city, an abundant supply of pure water for extinguishing fires, and for domestic and other purposes; and also authorizing the creation of a stock for carrying on the work, not exceeding the amount of two millions of dollars, and an interest of five per cent.

This has not yet received the sanction of the Legislature, and remains in a state of suspence. It is hoped that it never will be acted upon.

I think that the plans for procuring water for the city, from foreign and distant places, are extravagant

and unnecessary. A supply may be had from nearer and domestic situations. I think it may be rendered perfectly evident, that the requisite supply can be procured without going out of the county of New-York. —and first, for the extinction of fires.

The location of the city is peculiarly fortunate in this respect. The Island on which it is built, is surrounded by salt-water, and salt-water is more efficacious for the extinguishment of fire, than fresh. All the districts from the rivers, to Cherry, Pearl, and Greenwich-streets, for example, and even further, could be adequately protected, and at small expense. A pump worked by wind-sails, might be the elevating power. One of these machines might be constructed from place to place, on pier-heads, a reservoir might be constructed near for containing a quantity ready for immediate use on an emergency. To obviate the inconvenience from animal putrescence in hot weather, the water might easily be filtered on its passage from the pump to the reservoir, for the purpose of separating the living creatures. The other parts of the city not within the reach of this means of protection, could get water from wells and cisterns as at present.

Secondly, for domestic, culinary, and other purposes.

From a careful enquiry into the subject, I have become convinced, that an ample supply of water for the purposes of drinking, cooking, washing, and manufacturing employments exists within the county, and that there is no need of going beyond it.

It is a matter of public notoriety, that by penetrating the earth almost anywhere to a moderate depth, water may be found. It is alledged however, that much of this water is hard and impure; and even if it was otherwise at the present day, it would become bad in the progress of population and settlement. It must be admitted, that there is a great deal of force in this remark. Many of our citizens recollect, that the Southern and Eastern parts of the city, were from an early day, supplied with potable water by carts. The selling of it from house to house was a regular and established business. It was called Tea-water; and was procured from a well situated near the junction of Orange and Chatham-streets. The business of carrying water about, was so much impaired by the establishment of the Manhattan Company, that the obtaining of it from this source was discontinued, and the well fenced up. I have no doubt that a good supply might be obtained at the present time, from the same spot.

Still the practice of carrying water about with carts, is by no means wholly discontinued. Certain wells in the neighbourhood, furnish water of a quality to suit persons of nice taste. This is found in many houses through the lower districts of the town, under the name of pure spring-water.

It must not be forgotten, however, that nature has done a great deal toward furnishing water. Along the shore of Harlem river, a great quantity of the most excellent fresh water has, for ages, been running to waste. Latterly, the oozings of it, in the form called boiling springs, were observed on his own ground, by Charles Henry Hall Esq. The appearances were so inviting, that he caused a dam to be erected, for keeping out the tide water. He then removed the salt mud and trash. The consequence was, that he obtained a pond of as excellent water, as ever gushed from the earth. On examining the issues or springs, he found them to extend a considerable distance along shore, and if dammed and ponded as they might easily and cheaply be, would furnish an admirable supply for the adjacent region. An explorer will readily trace these springs, to the hills which are situated to the westward, and rise from the margin of the plain or flat. These elevations abound with water, which may be traced along their sides, and up to their very summits. It is very rationally estimated that an abundance might be collected here, and conducted to any place where it might be wanted, at a very moderate expense.

But there is another comfortable view of the subject. The county of New-York, has a very extensive substratum of gneis rock. On this is superinduced diluvial soil of different depths; though in many places the rocks are bare. This soil has been found to be charged with organic remains, evidently the exuviæ of the ocean. It is besides impregnated with animal and vegetable substances of a more recent origin. In this soil the wells and springs are of inferior quality. Yet should this be the fact, there is a remedy; for by boring the rock to the depth of a few hundred feet, water can be procured of an unexceptionable quality. This has been demonstrated by the Manhattan Company, in their successful experiment, near the corner of Bleecker-street and Broadway. A copious fountain has been disclosed, of pure and potable water.

The present water-works of the company are capable of furnishing six hundred ninety one thousand and two hundred gallons, in twenty-four hours. The engine and pump can raise this quantity in about sixteen hours on an average. If it was necessary, these very works could supply the city with one million, thirty-six thousand and eight hundred gallons all the year round, every twenty-four hours. Though attempts have been made to exhaust the whole stock of water by pumping it to dryness, this has been found to be impossible; by the force of two engines, each of eighteen horse power. The reservoirs when full, contain one hundred and thirty-two thousand, six hundred and ninety-six gallons. When the pumps cease to work, the water in the well, which is twenty-five feet in diameter, rises at the rate of fifteen feet per hour. The length of the pipes laid in different parts of the city, is upward of twenty-five miles, or was so in 1823. They must be much more extensive now. At that time, more than two thousand houses, exclusive of manufactories, were supplied with water. The calculation is, that if a single house consumes thirty gallons a day, then from the present source, eleven thousand five hundred and twenty houses might be supplied daily, in addition to the present number. The water when pumped up, is perfectly clear, and the reservoirs are so constructed with strainers, that impurities, if there should be any, cannot pass into the pipes of conduit. The water is considered wholesome, and it has never proved unhealthy to those who drink it.

The other sources of supply from various parts of the island, are innumerable, or as numerous as the inhabitants choose to make them, all over the island.

Great stress is laid upon the word *pure*. If I understand the meaning, it imports that the water is perfectly free from foreign admixture. In this sense of the term, pure water is an exceedingly rare and scarce article. If there is any thing that deserves the name of an universal menstruum, it is water. It has pleased the Creator to mingle with it several substances, that do not deteriorate it, but in some respects render it

more healthy. This, at least, may be said of the small portion of the Carbonic acid, carbonate of lime, and common salt, that are found in it. They may be considered as imparting to it somewhat of a cathartic and diuretic effect; facilitating its discharge by the intestines and kidneys. Such admixtures, when small in quantity, instead of impairing the wholesomeness of the water, may be considered as improving its quality for drinking.

Upon the whole, the New-Yorkers may feel happy, that they have within their reach, an abundant supply of water, good enough for culinary, domestic, economical, and manufacturing purposes.

Before I conclude, I ought to mention, that I have been favoured by Mathew L. Davis Esq., with an interesting abstract made by him, from the London book; and that I have received from him, a variety of other valuable information on the subject.

[For the New-York Farmer.]

ART. CV.—*Boquet of Useful and Amusing Trifles.*

Mr. EDITOR.

About a year ago, I commenced filling up a blank book, with extracts and occasional remarks. It has grown to some size, and lately got the name of Hortulian Garland, or Boquet of Useful and Amusing trifles, principally relative to the garden; from which book the following selections are taken. When you are in want of light matter, that may be useful in sportiveness, offer them to your readers. Yours, &c.

LANSINGBURGH.

Native Wine.—A very *naive* piece of advice was given the other day by a Virginia paper, to temperance societies. "Gentlemen," said the editor, "you may get up societies, pass resolutions, institute branches, and still cannot succeed. Go and cultivate the vine, and that will make the nation as temperate as the French people are. Native wine," said he "would promote public morality."

Wine is raised in Columbia county, Georgia, which has been taken for Madeira. Even good judges of the beverage were mistaken as to the place of its nativity.

The Method of Making Gooseberry and Currant Wines.—The following method of making superior gooseberry and currant wines is recommended in a French work (*Bili Physico-Econom.*) For currants, 8 lbs. of honey are dissolved in fifteen gallons of boiling-water, to which, when clarified, is added the juice of 8 lbs. of red or white currants. It is then fermented for twenty-four hours, and 2 lbs. of sugar to every gallon of water are added. The preparation is afterwards clarified with the whites of eggs, and cream of tartar. For gooseberry wine, the fruit is gathered dry, when about half ripe, and then pounded in a mortar. The juice, when properly strained through a canvas bag, is mixed with sugar, in proportion of 3 lbs. to every two gallons of juice. It is then left in a quiet state for fifteen days, at the expiration of which it is carefully poured off, and left to ferment for three months, when the quantity is under fifteen gallons, and for five months when double that quantity. It is then bottled and soon becomes fit for drinking.

Raisins and Currants.—About eight thousand tons of raisins, or dried grapes, are annually imported into England, at a duty of about £160,000. A considerable quantity of undried grapes are also imported, principally from Portugal, in jars, among saw-dust. The value of those so imported, is about £10,000. The *currants* of commerce, which are so extensively used in England, and of which about six thousand tons are annually imported into this country, are small dried grapes, principally grown in the Ionian islands.

Laborde, in his account of Spain, gives the following description of the mode of drying raisins: In the kingdom of Valencia, they make a kind of ley with the ashes of rosemary and vine branches, to which they add a quart of slacked lime. This ley is heated, and a vessel, full of holes, containing the grapes, is put into it. When the bunches are in the state desired, they are carried to the naked rocks, where they are spread on beds of the field Artemisia, and are turned every two or three days till they are dry. In the kingdom of Granada, particularly towards Malaga, they are simply dried in the sun, without any other preparation. The former have a more pleasing rind, but a less mellow substance; the skins of the latter are not so sugary, but their substance has a much greater relish; therefore, the raisins of Malaga are prefered by foreigners, and are sold at a higher price: to this their quality may likewise contribute; they are naturally larger, and more delicate than those of the kingdom of Valencia.

Cow Cabbage.—This is the name of a vegetable recently introduced into this country. It grows from six to twelve feet high, and affords an abundant supply of green fodder for cattle. The stalks live four years. In France they are permitted to stand out all winter, but in this country, they should be defended from the frost by a sheaf of straw well secured at the top. The N. E. Farmer states that "sixty plants are said to afford sufficient provender for a cow a year; and, as the side shoots only are to be used, it lasts four years without fresh planting. A square of sixty feet will contain 256 plants, four feet apart, or 16 more than 4 cows require for a year's provender, without any other food."—*Massachusetts Yeoman.*

White Beef.—A drover came to market a few days since, with twenty fine fat oxen. They had all had the same treatment and food, and weighed from 1000 to 1200 lbs. each. A butcher purchased and slaughtered them all in the usual manner. The meat of nineteen of them had the common and uniform appearance; but the *meat* of one was nearly white, so as to require a near view to be distinguished from the fat. The muscular fibres were regular, but fine, the fat abundant, and in its ordinary locations; the bones hard; the kidneys red and healthy; and every part of the animal indicated sound health. A great number of persons purchased pieces of the beef to try, and afterwards pronounced it tender and excellent. The hair of the animal was black.—*Boston Pallad.*

Winter Quarters of Frogs.—The following fact may, perhaps, be acceptable. In draining a bog, or springy piece of ground, in the winter of 1813-14 (during the frost,) I discovered a large quantity, some hundreds I suppose, embedded about three feet below the surface, in the head or source of a more than usually strong spring. Upon being uncovered they appeared very inactive, but not torpid or motionless, and attempted to bury themselves again in the sand, which, from the flowing of the water was so easily separated as to admit a pole of considerable length to run down it with a slight pressure. The c[illegible]ty in which they

were, and which apparently was formed by them, was so placed that the water of the spring flowed through it, and prevented their feeling the effects of the frost. In cleaning ditches or stagnant ponds during the winter, I have never seen any but at the bottom of ponds, in which, I am told, they are common. Are we not to infer from this that they instinctively seek springs, as the water is less liable to freeze; and, as they were in the instance mentioned capable of moving, that they do not hybernate or become torpid during the winter, but that they respire in water, or in their hiding places? I have never observed them in ditches or pools until near their spawning time, viz. after a few warm days in February or March, when their "*croaking* is considered the precursor of spring and provocative of sport" to boys; after which the embryo frogs appear as black spots in a large mass of gelatinous matter.—*Mag. of Nat. Hist.*

Agricultural Report for 1830, *District of Quebec.* Our Reports for last year closed with October. The frosts did not set in till late in November, and were then severe, without sufficient snow to protect the ground till some time before Christmas. The frost consequently penetrated deep, and in wet lands the effect is visible in the destruction of the grass, where water stood at the setting in of the cold, and the heaving of the ground by the ice formed under the surface.

April set in mild, and the snow, which never attained a depth of above three feet, disappeared earlier than usual by nearly a fortnight. On the 19th of the month, the Thermometer rose to 75°. Sowing commenced about the 20th, and although some hard frost succeeded, the Grain was up in many places before the close of the month. The season has been very favorable for getting in the seed, and the ground in good condition. These circumstances, and the great extent of ploughing done last fall, will lead to a greater quantity of Wheat being sown this year than usually.

There has been an abundance of fodder of all kinds for cattle during the winter, and they are generally in good condition. The pastures, owing to the frost in the fall, are more backward than usual after the disappearance of the snow. The sown grasses have, however, stood out the winter, and will afford good crops of hay or pasture the second year, a fortnight earlier than those of natural growth.

There has been very little rain since the opening of Spring, and all the natural meadows, particularly in low situations, have patches, frosted, and are rather unpromising.

Markets both for Meat and Grain have continued good throughout the winter. Potatoes have been nearly one half cheaper than in former years, and at a distance from town they have been employed in feeding hogs and cattle, which will augment the quantity and quality of the meat market.—*Quebec Gaz.*

WOMAN.

Love in the myrtle bloom is seen:
Remembrance to the violet clings:
Peace brightens in the olive green;
Hope from the half chos'n Iris springs:
And vict'ry on the laurel grows,
But woman blushes in the rose.—*Anon.*

THE MOSS ROSE.

The Angel of the flowers one day
Beneath a Rose tree sleeping lay,
That Spirit—to whose charge is given,
To bathe young buds in dews from heaven.
Awaking from his light repose,
The Angel whisper'd to the Rose:
"O fondest object of my care,
Still fairest found where all are fair,
For the sweet shade thou'st given me,
Ask what thou wilt, 'tis granted thee."
"Then" said the Rose with deepen'd glow,
"On me another grace bestow."
The spirit paused in silent thought.
What grace was there that flower had not!
'Twas but a moment—o'er the Rose
A veil of Moss the Angel throws,
And robed in nature's simplest weed
Could then a flower that Rose exceed.

The March number of the New Monthly London Magazine contains these beautiful lines to the

WALL FLOWER.

I love thee, lone and pensive flower,
Because thou dost not flaunt thy bloom
In pleasure's gay and garish bow'r,
Or luxury's proud banquet-room;
But on the silent mouldering wall
Thy clinging leaves a fragrance shed,
Or give to the deserted hall
A relic of its glories fled.
These wreaths, in vivid freshness bright,
Methinks the flattering herd pourtray,
Who bask in fortune's golden light,
And wanton in her joyous way;
But thou art like that gentle love,
Which blooms when friends and fame have pass'd,
Towers the dark wreck of hope above,
And smiles through ruin to the last.

ART. CVI.—*Plants from Campeachy.—Extract of a letter from Consul H. Perine, to Appleton Walker, Esq., dated Campeachy, May 5th,* 1830.

I send you for Dr. Mitchill, two wine-boxes, full of young plants of Henequen: 150 or more. I wish you to explain to him, that *nearly all* the pods which are formed from the flower, and contain the seeds, fall off before they ripen, and that from each footstalk, from one to six little plants, like top onions, henequens in minature; so that the top of the long central stalk *appears* at a distance to be covered with green flowers, after the falling off of the pods, instead of the yellow flowers with which it was covered before. I presume that from 500 to 1,000 young plants are thus produced on one stem.

I have sown some log-wood seeds in the intervals of the small henequen's, and spread in one box on the spaces between them, the dried pods which contain log-wood seeds. It is possible you may mistake them for dried willow leaves, as they are so thin. I send a few however, in this letter, as samples. The young trees which may probably spring up during the voyage, will have the appearance of locust trees. As they may be mistaken for weeds, I have directed the captain not to have the box weeded during the passage; and you will deliver it to Dr. Mitchill as you find it.

[The stems of the Henequen grow to the height of 20 feet. Mr. P. has forwarded a beautiful full grown plant of that variety of Henequen, called *Sacqui.* See N. Y. Farmer, Vol. 2. p. 139.]

ART. CVII.—*Quality of Silk of the United States and East Indies.*

Extract of a letter from the house of Messrs. Rathbone, Brothers & Co. in Liverpool, to a lady in this neighborhood.

"We submitted the skein of silk, which you sent us, and the box of your cocoons, to a clever and experienced practical man, who has established himself here as a Silk Broker; and we now send you the result of his examination, with some remarks on the reeling of silk, which may be useful for your government, and that of your friends, to whom you are at full liberty to communicate them, if you think they will prove serviceable."

The Opinion.—The white cocoon is decidedly of the best quality, from which I should conceive the silk was made, which accompanies it. It is very similar to China silk, which is imported into Great Britain in very considerable quantities; and, being applicable to almost every purpose, in a great measure regulates the price of other silks. It is now worth 12*s.* per lb., or $2 66 cents; but, on an average state of the market, it may be stated at 13*s.*, or $2 88 cents. The two yellow cocoons, of the deepest color, are the best of the remaining three lighter shade; and the primrose one, is evidently the result of unhealthy worms. This circumstance was, I conceive, owing to the temperature of the atmosphere not being sufficiently warm; or the mulberry leaves, on which the worms were fed, not being sufficiently dry. Silk worms, fed on lettuce leaves, frequently spin silk of a pale yellow, or primrose, neither of which are of appreciated quality.

Your friend cannot consult better authority, on these subjects, than Count Danlone, (see a translation of his work on the cultivation of silk, published by the British, Irish, and Colonial Company, of which I am a Director.) He points out in the clearest manner the various changes of the worm, and the particular heat and food requisite to the cultivation of good silk.

However, whatever may be the success attendant upon the attainment of good cocoons, every thing depends upon the proper selection and reeling of them into the hank. The Italians excel in this. Therefore, their silks are peculiarly adapted to our finest manufactures. Although our importation from the East Indies are great; and this trade is of such vital importance to our successful competition with the continent, it is to be regretted, that neither the East India Company, nor the private merchants, have hitherto employed any competent persons to superintend the reeling of the silk. If that were done, I have not the slightest doubt but that silks, of the Eastern production, would render us altogether independent of either France or Italy; for it is an established fact, that silk of the best quality, can be produced in the East Indies, at a lower rate than in Europe.

I have been long impressed with the idea that many of our other colonies are also well calculated for the cultivation of this valuable material; and, as the silk manufacture is *daily increasing* in importance, there will be every inducement to extend the cultivation of a produce, which has proved *a source of immense profit to those who have hitherto embarked in it.*

The three things principally requisite are, that the silk should be *clean, even* and *not sticky.* The first of these properties depends on the caution of the reeler. He ought to take great care not to allow any of the inferior cocoons to be intermixed with those of a good quality. The second property depends upon the caution of the reeler taking care that when one cocoon breaks, another is instantly substituted. And the third depends upon the silk not being reeled too rapidly, and not being well crossed upon the hank, but also well acted upon by the croise.

The following information may be useful as showing the average prices, which the Company and private Bengal silk have realized in this country for the last 9 years.

Company.	*Private.*
1820—242 pence per lb.	1820—193 pence per lb.
1821—214	1821—185
1822—249	1822—180
1823—216	1823—163
1824—210	1824—152
1825—241	1825—189
1826—174	1826—137
1827—203	1827—170
1828—204	1828—187

The proper way to reduce these sums into the current money of the United States, is, to consider every fifty pence as one dollar; for that, according to Mr. Smith's Report to the Senate, is one half penny more than the actual value of the Spanish dollar. The American dollar is still less.—*Sumpter (S. C.) Gazette.*

[For the New York Farmer.]

ART. CVIII.—*On the fascinating powers of Snakes.*

"The Cat Bird is one of those unfortunate victims, and indeed the principal, against which *credulity* and *ignorance* have so often directed the fascinating quality of the black snake. A multitude of marvellous stories have been told me by people who have *seen* the poor Cat birds drawn, or sucked, as they sometimes express it, from the tops of trees (which by the by, the Cat bird rarely visits) one by one, into the yawning mouth of the immoveable snake. It has so happened with me, that in all the adventures of this kind that I have witnessed, the Cat bird was actually the assailant, and always the successful one. These rencontres never take place but during the breeding time of birds; for whose eggs and young the snake has a particular partiality. It is no wonder that those species whose nests are usually built near the ground, should be the greatest sufferers, and the most solicitous for their safety; hence the cause why the Cat bird makes such a distinguished figure in most of those marvellous narrations. That a poisonous snake will strike a bird or mouse, and allow it to remain till nearly expiring before he begins to devour it, our observations on the living rattlesnake kept by Mr. Peale, satisfy us is a fact; but that the same snake, with eyes, breath, or any other known quality he possesses, should be capable of drawing a bird, reluctantly, from the tree tops to his mouth, is an absurdity too great for me to swallow.

"I am led to these observations by a note which I received this morning from my worthy friend Mr. BARTRAM. Yesterday, says this gentleman, I observed a conflict between a Cat bird and a snake. It took place in a gravel walk in the garden, near a dry stone wall. I was within a few yards of the combatants. The bird pounced or darted upon the snake, snapping his bill; the snake would then draw himself

quickly into a coil, ready for a blow; but the bird would cautiously circumvent him at a little distance, now and then running up to and snapping at him; but keeping at a sufficient distance to avoid a blow. After some minutes it became a running fight, the snake retreating: and at last, took shelter in the wall. The Cat bird had young ones in the bushes near the field of battle.' Vol. 2. p. 131.

D. T.

[For the New-York Farmer.]

ART. CIX.—WILSON'S ORNITHOLOGY.—*The blue-eyed Yellow Warbler.—The Purple Grakle or Crow Black-bird.* [Continued from page 93]

This little bird is remarkable for activity and cheerfulness, passing from branch to branch of the apple trees near our windows, picking the straggling caterpillar or "*measurer*" from the leaves, and *singing* at every pause in his labors. He is entitled to great kindness and respect.

This was written without recollecting WILSON'S remarks, who says, "It has a few shrill notes, uttered with emphasis, but *not deserving the name of song.*" So our opinions differ.

WILSON further observes, that "it appears almost always actively engaged among the leaves and blossoms of the willows, snow ball shrub, and poplars, *searching after small green caterpillars, which are its principal food.*"—"It is a sprightly, unsuspicious, and familiar little bird; is often seen in and about gardens; among the blossoms of fruit trees and shrubberies, and on account of its color, is very noticeable."

"Hind head and back, greenish yellow; crown, front, and lower parts, rich golden yellow; breast and sides, streaked with dark red; wings and tail, deep brown, except the edge of the former and the inner vanes of the latter, which are yellow; the tail, slightly forked; legs, a pale, clay color; eyes and eye lids, light blue."

The purple Grakle, or Crow Black Bird.

One of my friends, had erected boxes, high on a Lombardy poplar near his house, for the *martin*, but was disappointed in finding this favourite bird dispossessed by the *purple Grakle.* The latter, however, was kindly treated; returned regular in spring; kept posession during several seasons; increased in numbers; and picked much of their food from the yard. This taste for building in boxes, appears to have been unknown to WILSON.

He remarks, however, that "a singular attachment frequently takes place between this bird and the Fish Hawk. The nest of the latter is of very large dimensions, often from 3 to 4 feet in breadth, and from 4 to 5 feet high; composed, externally of large sticks or faggots, among which sometimes 3 or 4 pair of *black birds* will construct their nests, while the hawk is sitting or hatching above. Here each pursues the duties of incubation, and of rearing their young; living in the greatest harmony, and mutually watching and protecting each others property from depredators."

WILSON has drawn the purple grakle in the attitude of tearing a young plant from the ground, for the purpose of feeding on its bulb. Had he represented it at a hill of Indian-corn, he would have brought the case "home to men's business and bosoms," for this bird is eminent for his depredations on this sort of grain. "As soon as the infant blade begins to make its appearance above ground, says WILSON, the grakles hail the welcome signal with screams of peculiar satisfaction; and without waiting for a formal invitation from the proprietor, descend on the fields, and begin to pull up and regale themselves on the seed, scattering the green blades around." Again "when the young ears are in their milky state, they are attacked with redoubled eagerness by the grakles and red-wings. I have seen fields of corn of many acres where more than one half was ruined. Indeed, the farmers in the immediate vicinity of the rivers Delaware and Schuylkill, generally allow one fourth of this crop to the Black birds, among whom our grakle comes in for his full share.

As some consolation, however, to the industrious cultivator, says WILSON, I can assure him, that were I placed in his situation, *I should hesitate whether to consider these birds most as friends or enemies*, as they are particularly destructive to almost all the *noxious worms*, *grubs*, and *caterpillars*, that infest his fields, which were they allowed to multiply unmolested; would soon consume nine-tenths of all the production of his labour, and desolate the country with the miseries of famine. Is not this another striking proof that the Deity has created nothing in vain; and that it is the duty of man, the lord of the creation, *to avail himself of their usefulness*, and *guard against their bad effects* as securely as possible, without indulging in the barbarous, and even impious wish for their utter extermination."

WILSON had previously noticed their habit of following "in the furrow after the plough, their food [in Spring] consisting of *worms*, *grubs*, and *caterpillars*, of which *they destroy prodigous numbers*, and as if to recompense the husbandman beforehand for the havoc

they intend to make among his crops of Indian corn."

It is easy to guard against their depredations on the young corn in Spring, by rolling the seed in a little hot tar; and could a protection so cheap and so effectual be found for this grain in the latter part of Summer and Autumn, this bird would be respected as one of the best friends of the farmer.

"The purple Grakle is easily tamed, and sings in confinement. They have also in several instances, been taught to articulate some few words distinctly."

ART. CX.—*Remarks on back numbers of the New-York Farmer.* [Continued from page 94.]

Vol. 2, p. 222. It is a rule among gardeners, that *herbaceous plants may be successfully removed at any time during summer*; but that *trees or shrubs should only be transplanted in spring or autumn.* By some writers indeed (as in the article refered to) we are directed to suspend this operation on fruit trees, "till the trees have shed their leaves."

No doubt there is great difference in the climate as well as in the soil of the Middle and Eastern States; and the best season for transplanting in one place will not be the best in another. But I am partial to autumnal planting, and in this northern part of the 43d. degree of latitude, never hesitate to remove our common fruit trees after the close of the ninth month (September.) A more general rule might be given, which would serve for an extensive region, to wit; *It is safe to transplant trees or shrubs as soon as the summer heat is over, and the fall rains have wet the ground.*

To know what may be done in this line with a reasonable prospect of success, is important to horticulturists on their travels, whose opportunities for procuring desirable plants may not recur. Permit me therefore to detail some of my own experience, and it will appear that the ordinary rules may be sometimes disregarded.

In the early part of the sixth month (June) 1827, I brought *Juniperus prostrata* 150 miles, and planted it on the north side of a board fence with perfect success though the new leaves were expanded.

On the 4th. of the ninth month (Sept.) 1828, I was presented with a pear tree (a rare variety) brought it 340 miles, and could not discover it injured by that *untimely* removal.

On the 20th. of the eigth month (August) 1829, I procured *Ilex canadensis* from a swamp at the distance of 20 miles. Bog moss was plentifully inlaid round the roots, when it was planted in my garden, and these shrubs are now growing.

On the 21st. of the ninth month (Sept.) 1829, I removed 2 grafted cherry trees *in full leaf*, and their vegetation is now vigorous and rapid. At the same time, I transplanted 3 of the *malvoisie vine.* A few weeks after, on taking up one of those for a friend, I found *a new root* 2½ inches long. Both are now growing well.

In the 4 last cases, it should be remarked, that the season was wet. D. T.

The salaries paid annually to all the persons employed on the *Times*, a newspaper of London, is about $75,000.—The duties to government, $4,000 per week.

ART. CXI. *The Four Great Sources of Health.*

The preservation of health mainly depends on early rising, temperance in eating and drinking, exercise, and cleanliness.

These important advantages are distributed between the rich and the poor in a tolerably fair proportion, which accounts for the apparent equability in the length of life between the one and the other. The poor have early rising, which is of the very first consequence, and of which I shall speak hereafter more fully. From this the rich are almost excluded, because they have no obligation to compel them, and because they go to bed too late.

The humble and often scanty diet of the poor, which they so much deplore, is yet of advantage to their health. True it is that, as they work hard, they could bear more substantial diet than they can generally procure. But luxurious living is very prejudicial; it vitiates the blood and humours, and lays the foundation of numerous complaints. From not being able to afford suppers, the poor enjoy sound rest, the want of which is so much complained of by the rich. But the poor injure themselves materially by intoxication, and that with drink of an inferior and hurtful quality. It is certain that every fit of drunkenness has its share in the shortening of life; for, however we may find men to whom it appears to do no injury, nothing is more reasonable than to conclude, that they would live longer by avoiding inebriation. Amongst the better classes, this vice has happily, for many years past, been gradually declining; and it is now a great reproach to gentlemen to be seen drunk. But they use rich wines, *liquers*, and spirits, of which, at their numerous meals, without getting tipsy or drunk, they take too much altogether. They likewise eat much more than is necessary or proper, and that generally of things so artificially prepared, that the simple qualities are lost, and may almost be considered as a medicine instead of natural food.

Of exercise, which is allowed by all as indispensable for the preservation of health, the poor have generally enough, but frequently too much; whilst, on the contrary, the rich, who, from their sumptuous living, really require more, can scarcely be said to take any. This is a heavy draught on the resources of longevity. The subject is of great importance, and will in the course of the work be treated with particular attention.

But it is in cleanliness that the rich have indeed inappreciable advantages over the poor. The word has too extensive a meaning to be considered, under all its bearings, in this concise sketch. It will suffice here to say, that it must be taken in something more than its usual signification, personal cleanliness. In the present view, it embraces numerous comforts, domestic and personal, and many valuable conveniences, presenting important securities against injury to the health. That personal cleanliness, a thing nearly quite disregarded or unpractised by the poor, is of the greatest utility, will be hereafter fully shown; but there are other serious disadvantages to which their poverty or want of means subject them. Clothes soaked with rain, and then sitting by a fire, and being obliged, from want of changes, to wear the same damp the next day—bad shoes—humid apartments from neglected roofs, washing of clothes, and other causes—foul air, from many persons crowded into a single room. Such are a few of the consequences of the

privations of the poor as to cleanliness and comforts, from which result constant coughs and colds, asthma, rheumatism, and other complaints, which would preclude them from old age, were it not for their early rising, simple diet and exercise.

—There is much difference between the labourer in the country and the working classes in large towns. If the former has to endure wet and hardships out of doors, he is accustomed to it from his infancy, and is descended from a hardy race; his hovel or hut, be it ever so miserable, or so crowded, has the advantage of a much purer air than the room-keeper's garret in town; he has fewer opportunities of dissipation; his food, though poor, is wholesome; his hours of meal-time are more regular, and his work is more uniformly healthful.

The country gentleman too has advantages over his equal in town. His exercise is of a rougher and more decided cast; his food is more plain, because the confectioner, the pastry cook, and the foreign fruiterer, are not always convenient; balls, parties, and theatres do not offer every evening, and if he drink more after dinner, he can bear it better, because his food is more substantial and simple. The balance indeed seems to be in favour of the country; and, accordingly, it is there that we mostly find instances of uncommonly extended life.—*Simplicity of Health.*

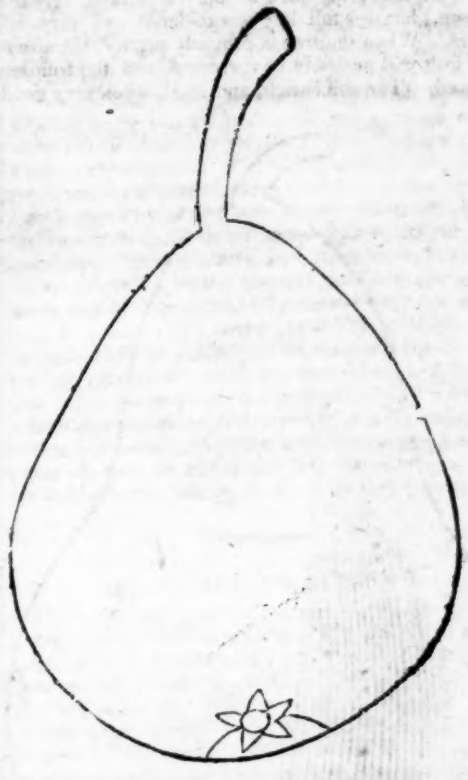
[The following description of seedling pears exhibited before the Massachusetts Horticultural Society, was drawn by S. Downer Esq., of Dorchester, for the N. E. Farmer. We are indebted to the proprietor of that paper for the use of the cuts.

There are, undoubtedly many valuable seedlings in this section of the country, little known to the public. We should be much pleased, that some of our readers would furnish us with descriptions and drawings, and we will be at the expense of the cuts. There are also superior pears of foreign origin, that would have public attention drawn to them much more generally by being figured.]

ART. CXII.—*American Seedling Pears.*

Lewis Pear.—This fine seedling pear has more than met our expectations the present season; its fine qualities will make it more generally known than heretofore. This winter they have kept until February—in a dry, cool situation they may probably remain in eating until March. The *original tree*, and the two suckers transplanted from it, *have given full and constant crops the last ten years.* I will here allude to the great necessity of allowing our late fall and winter pears to remain on the trees as long as possible, even at the risk of high winds, and hard frost, (there is no danger from a little frost) their flavor improves very much the last ten or fifteen days they hang on the tree, and it prevents their shrivelling afterwards. The Lewis pear hangs on the tree very strong to the last. They have readily sold in our market, this winter, at $8,00 per bushel.

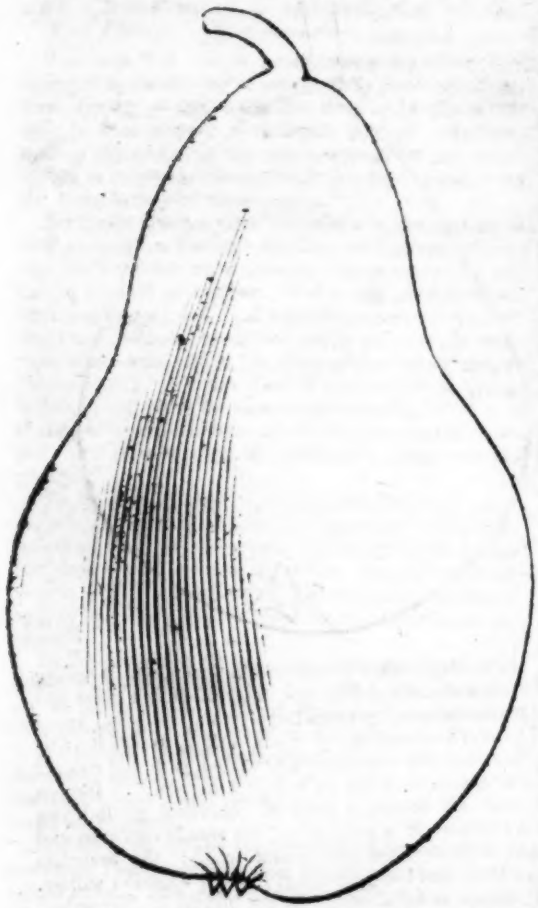
This pear is in size a little under medium, and will compare with the Crasanne in appearance more than any other pear; it is not so flat, but more pear shaped; has a stem one and a quarter inch in length, set in a little cavity, the blossom end indented with a large open eye; the flower leaves lay flat back on the bottom—skin of those growing on the outside of the tree yellowish green, and those growing on the inside, dark green with cloudy spots. Flesh whitish, and fine grained, melting, buttery and juicy, not so high flavored as many pears, but very pleasant, and will be a popular eating fruit with people generally.



It is sought after by our market-men, and is selling for six and seven dollars per bushel—it is a great and constant bearer, (it bears largely to a fault) and being a native, and seedling of recent origin, makes it valuable; also the tree being acclimated, it is not subject to so many accidents, as many of our delicate foreign trees. By having it grow in cultivated ground, you may be sure of a great crop; the tree is vigorous, and makes good sized and sound wood; the branches are long, and hang weeping, like our common willow. It begins to be in eating by the middle of November, and some years has continued till the last of January.

Dix pear.—Madam Dix's Mansion house is situated at the south part of Boston, where she has resided for more than thirty years; contiguous to the house, is a fine spacious garden, containing many large fruit trees, among which are a St. Germain, and Good Christian, both large, and near together, which may be the parents of this seedling pear, which came up fifteen years since, near the wood-house. Its close resemblance, in appearance, to the St. Germain, gives the strongest reason to suppose it one of its parents. The seedling pear tree is twenty-three feet high, and ten inches in diameter, four feet from the ground. With the exception of some of the lower limbs having been taken off the last season, it has never been pruned; and has always remained where it sprang up. The top is so thick with branches and cross limbs, being full of

thorns that the head cannot be entered but with difficulty. The branches grow out at first horizontally, then after bending down a little, turn up at the end. It makes rather small wood; leaves small, and finely serrated, not folded like the St. Germain, but flat, with long stems, color light green, with a gloss. The tree has been in bearing three or four years, (sparingly this season,) but was full last year of large and very fair pears. When the tree is properly pruned, the size of the fruit will probably be increased, and the fruit improved. The soil is rich, and its situation very good.



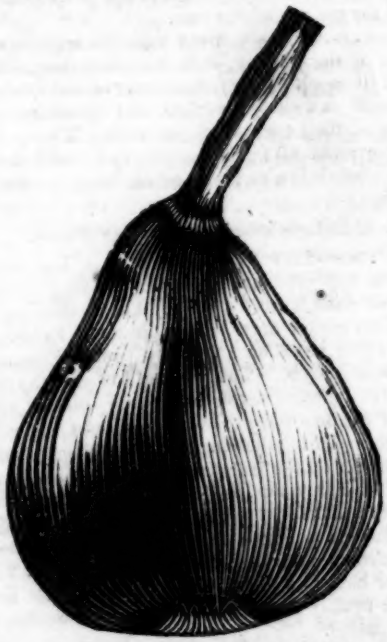
Size, over medium, and may rank with large pears; the specimen of which a drawing is now made for the Massachusetts Horticultural Society, was taken from one, measuring four and a half inches high, and eight round; skin rough, and rather thick, resembling the St. Germain, but is longer and larger. Those growing inside of the tree, are green; but those on the outside, exposed to the sun, have a fine blush, turning yellow when mature. Stem not exceeding three quarters of an inch in length, not large, and set on the top of the fruit; blossom end a little indented, with a peculiar eye, appearing as if drawn up with a string, and puckered or plaited round it, and a little knobby at the bottom. This very fine pear compares very nearly to the St. Germain in appearance, but has higher and more fine flavor in it; comes in eating sooner than the above named pear, being in perfection from the middle to the last of October. It bids fair to be one of our very best autumn pears, and valuable for its recent origin, and its claims as a native. It may with the greatest safety be introduced into our gardens and nurseries.

From what we have seen of this variety, I think it will be one of our handsomest and very best pears, and will be largely cultivated in our gardens.

Gore's Heathcot pear.—This fine seedling did not, the last season, bear as well as usual; but the fruit sent to the Hall of the Society, was very excellent. This variety will be a good substitute for the St. Michael's —This comparison is recommendation enough for it.

Wilkinson pear.—This very superior and new pear, will be one of our greatest favorites. It is represented as a great and constant bearer.

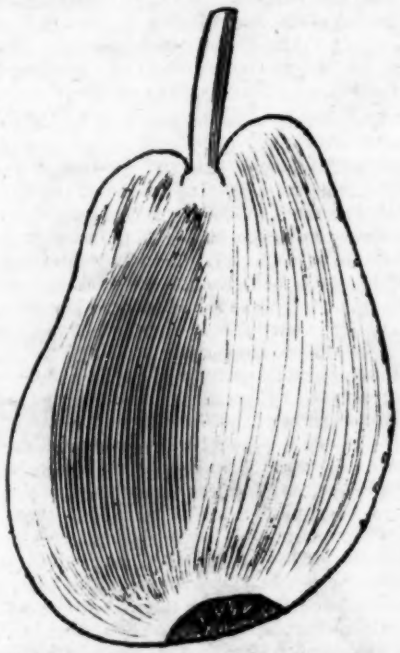
Clap pear, reared by Capt. Wm. Clap, Dorchester. —Size, rather under medium; color, yellowish green, with a little brown blush on the sunny side; stem long, and bending over, set on the top, with a little rising round the bottom of the stem; eye or blossom end a little indented, and common size; flesh, whitish, buttery and juicy, has a high aromatic flavor, and is a little musky, resembling very much our old fashioned August Catharines, or "Katterns" in taste, but a little more sprightly; form and appearance being however one quarter larger; more free from blast or black spots, and the brown of not so deep a shade. The tree grows vigorously, branches upright, leaves dark green, rather broad and flat, and finely serrated; color of the wood brownish, with long thorns.



The leaves turn yellow and commence falling as the fruit ripens, and in a short time the tree becomes nearly bare of foliage. There is no doubt of this tree being a seedling; and I should judge from its resemblance, that the Catherine above alluded to, was one of its parents. It came up by chance near the house, and has never been moved. It is sixteen years old;

is thirty feet high, and seven inches in diameter; has borne constantly for the last four or five seasons pretty full, considering its vigorous growth. I should think this summer pear, on account of its good qualities and recent origin, worthy of recommending to our nurseries and the public. It is in eating by the middle of August, being a little sooner than the old kind, which has been declining for some years, although it has done better this season.

Cushing pear.—Mr. Editor—In compliance with your request, I send you a drawing and description of Col. Washington Cushing's (of Hingham,) superior wilding pear, which is destined to hold a high rank among our native pears. I think there is little doubt but it will improve in quality, and increase in size, from one-quarter to one-third larger, when cultivated in our gardens or ploughed fields, as was the case with the Harvard (Epargne) pear. I can also add the opinion of a gentleman, respecting this variety, whose judgement on fruits is considered first rate, who declared on tasting it, that it was superior to the Bartlett, Harvard, Andrews, Moorfowl, or Swan's Egg.



The before mentioned Pear is a little under medium size, color light green, with a little brownish blush on the sunny side, smooth and shining skin, formed like the Harvard pear, but fuller near the stem, which is three quarters of an inch long, placed on one side of the top, in a little cavity; and a rise on the other—Blossom end a little indented,—and is a great and constant bearer,—Flesh whitish, melting, buttery, and full of delicious juice, tasting like the Andrews pear, but has more flavour and sprightliness. It is in eating the middle of September.—It may be recommended with the greatest confidence to the public and our nurserymen, as one of our finest varieties.

Harvard (or Epargne) Pear.—This Pear has proved very fair and fine flavored this year; some of them weighing five—and some six ounces each. The old trees have borne very full, the young trees will do the same as they become older, being then less vigorous. This superior pear has taken a new name; the Committee on Fruits of the Horticultural Society having given it the name of Harvard Pear, after the founder of Harvard University, it being satisfactorily established to them that it is a wilding of Cambridge, Mass. besides the impropriety of its bearing so many names, viz. in Cambridge, the Sugar pear, in Boston, Epargne or L'Epargne,—and in some catalogues, Boston Epargne. Mr. Robert Manning, of Salem, Mass. has had a tree of the true French Epargne, growing in his fine garden and nursery, which was among the specimens of his bearing trees imported from France, the character of which is entirely different—the branches of the Harvard growing upright like the Lombardy Poplar and has thorns; whereas those of the true French Epargne grow weeping, like the Jargonelle pear tree—the fruit also, is neither so large, nor so fine in quality, as the Harvard, which is one of our best pears for the season, (September 1st,) and many rank it second only to the Seckle, than which it is larger. It is a constant and full bearer when the tree has age; its rapid growth preventing its bearing for four or five years, which is a good peculiarity. Its excellent qualities make it deserving of a recommendation to our nurseries and the public, as a very superior pear. It may be added that it is in good favor with the market-men, selling at 4 to 5 dollars per bushel.

Art. CXIII.—*Disease in Cattle.*

In no one particular do farmers often suffer greater losses, than by disease in cattle. The stock of a whole neighborhood is sometimes almost entirely swept off, by some fell disease, the cause of which, and its remedy, are unknown. There is much necessity for a greater acquaintance with the habits, anatomy, and diseases of live stock. Much attention too, should be paid to the various kinds of food, and management on the different breeds. Some breeds are much more liable to diseases than others. The following is from the Newburyport Herald.

Mr. Allen.—A very singular disorder has appeared among my stock of cattle, during the past summer, some account of which, by your leave, may be the means of ascertaining its nature, and leading to a cure in cases like circumstanced. In June last, two cows; two oxen, and two horses died, and last week, one horse and one ox, in all, eight creatures. The first that died was, without any previous symptoms of disorder, found dead in her stall. The others lived between twelve and eighteen hours from the attack; symptoms, heaviness about the eyes and loss of appetite without much apparent pain until shortly before death, when the agony became extreme. On opening the bodies, the intestines were found in a healthy state, the vital parts not disordered, and no appearance of disease, save in the spleen or melt, which was enlarged to twice its usual size, and looked mortified. All the ordinary means for curing cattle were used in these cases. A number of cattle belonging to different persons in the neighborhood have died, apparently from the same cause.

Yours, &c.

Robert Patten.

Amesbury, Nov. 28, 1829.

[For the New-York Farmer.]

ART. CXIV.—*On the culture of the Fox-Glove.*

The purple fox-glove, including a white variety, is *an imperfect perennial, like* biennial plants, its vital energy is exhausted in producing flowers and seeds; but *unlike* biennials, lateral shoots grow simultaneously with the stalks, and often form good roots of their own, so as to survive the mature parts of the plant.

Latterly, I have been in the practice of separating the suckers or *new parts* of the plant from the dead stalks and rigid roots; and as these shoots are thick and succulent, I have transplanted them with invariable success. Frequently, they flower the same season, and if not, always afford fine plants for another year.

In the autumn of 1827 I procured *a lateral shoot* of the white fox-glove. It has flowered profusely, many suckers have been removed, the *hard* roots have been extracted, and I perceive no indications of decline.

Independent of its medicinal properties, the fox-glove receives a liberal share of admiration, though it blooms in the most abundant season of fine flowers. When unprotected, in the open ground, it sometimes perishes in winter, though the white variety is naturalized in the woods near Pultneyville (Wayne co.,) whence I received a fine one in the fall of 1825. On the approach of winter, I have crowded round the plant, fallen leaves: and strewing more on the top, have confined them by a sprinkling of earth. This mode has been successful; but none has preserved such a fine green as one which I covered with *a thin inverted sod.*

D. T.

Greatfield, 4 mo. 1830.

ART. CXV.—NATURAL HISTORY.—*Instinct of Animals and Vegetables*—By the EDITOR. [Continued from page 112.]

Without entering into any lengthy disquisitions concerning the nature of instinct, we shall briefly state the opinions of some of the most distinguished writers on this subject, and then give instances of this power, both in animals and vegetables.

Des Cartes considered brutes as mechanical machines, without ideas and sensation, and feeling neither pain nor pleasure. It is hardly necessary to state that this most whimsical hypothesis found but few supporters.

Mr. Smellie and Dr. Darwin have contended that instinct is altogether a mental principle, the brutes possessing it in a more limited range than mankind. The former contending that reason is the result of instinct, and the latter that instinct is the result of reason.

Another class of philosophers consider instincts of a mixed nature, either originating in a power holding an intermediate nature between matter and mind, or in some instances as simply material, and in others mental.

Dr. Good, a modern and celebrated writer on the philosophy of nature, who appears to have correct views on this subject, considers "*instinct the operation of the* LIVING PRINCIPLE, whenever manifestly directing its operations to the health, preservation, or reproduction of a living frame, or any part of such frame."

"Instinct, sensation, and perception, are all principles *essentially different*; they may, indeed, exist conjointly, but each of them is capable of existing separately. Instinct is the common law or property of organized matter, as gravitation is of unorganized."

"The law of instinct, then, is the law of living principle: instinctive actions are the action of the living principle; and either is that power which characteristically distinguishes organized from unorgansized matter, and pervades and regulates the former as gravitation pervades and regulates the latter, uniformly operating by definite means, in definite circumstances, to the general welfare of the individual system, or of its separate organs; advancing them to perfection, preserving them in it, or laying a foundation for their reproduction, as the nature of the case may require. It applies equally to plants and to animals, and to every part of the plant as well as to every partof the animal, so long as such part continues alive. It is this which maintains from age to age, with so much nicety and precision, the distinctive characters of different kinds and species; which, as is noticed in a preceding study, carries off the waste or worn out matter, supplies it with new, and in a thousand instances suggests the mode of cure, or even effects the cure itself, in cases of injury or disease. It is "the divinity that stirs within us" of Stahl; the vis medicatrix naturæ of Hofman and Cullen, and the physicians of our own day. It is hence the strawberry travels from spot to spot, and the cod or the cuckoo, from shore to shore, or from climate to climate.

"In supplying the place of reason, it is perpetually assuming its semblance. Let us take an example or two from both the vegetable and the animal world."

"In order that the seeds of plants should produce and perfect their respective kinds, it is necessary that their shoots should rise to the surface of the earth to enjoy the benefit of light and air. Now in whatever direction the eye of a seed, from which germination first radiates, is placed, these shoots ascend equally to the surface, either in curved or straight lines, according as such ascent may be most easily accomplished. Mr. John Hunter sowed a quantity of peas and beans with their eyes placed in different directions, in a tub, which he afterwards inverted, so that the bottom was turned uppermost, while the mould was prevented from falling out by a fine net. And in order that the under surface might possess a superior stimulus of light and heat to the upper, he placed looking glasses around the mouth of the tub in such a way that a much stronger light was reflected upon the inverted mould than that of the direct rays of the sun; while at the same time, he covered the bottom of the tub with straw and mats to prevent the mould, in this direction, from being affected by solar influence. Yet the same instinctive law of ascent still prevailed. After waiting a considerable length of time, and perceiving that no shoots had protruded through the lower surface of the mould, he examined the contents of the tub, and found that they had all equally pressed upwards, and were making their way through the long column of mould above them, towards the reversed bottom of the vessel; and that where the eyes had been placed downwards, the young shoots had turned round so as to take the same direction. As one experiment leads on to another, he determined to try the effect of placing other seeds of the same kinds in a tub, to which a rotatory motion should be given, so that every part of it might be equally and alternately upermost, and the seeds should have no advantage in one direction over another.—Here, as we often behold in other cases, the instinct-

ive principle of accommodation was baffled by a superior power, and the different shoots, instead of ever turning round, uniformly adhered to a straight line, except where they met with a pebble or any other resistance, when they made a curve to avoid such obstruction, and then resumed a straight line in the direction into which they were thereby thrown, without ever endeavouring to return to the original path."

"Let us take, as an example, the very common instance of a brood of young ducks brought up under a hen, and contrary to all the instincts and feelings of the foster mother, plunging suddenly into the water, while she herself trembles piteously on the brink of the pond, not daring to pursue them, and expecting every moment to see them drowned. By what kind of experience or observation, by what train of thought or reasoning has the scarcely fledged brood been able to discern that a web-foot fits them for swimming, and that a fissured foot would render them incapable? a knowledge that mankind have only acquired by long and repeated contemplation, and which has never been fully explained to this hour. Habit, imitation, and instruction, would all concur in teaching them to flee from the water, as a source of inevitable destruction: and yet in opposition to all these influences and premonitions, we see them rush into it, and harmlessly: we see them obeying an irresistable impulse, which directs them to what is fitting, stamped in the interior of their little frames, and which is equally remote from the laws of mind and of mechanism."

"When a wasp, in attempting to transport a dead companion from the nest, finds the load too heavy, he cuts off its head, and carries it out in two portions."

"A strawberry offset planted in a patch of sand, will send forth almost the whole of its runners in the direction in which the proper soil lies nearest, and few, and sometimes none, in the line in which it lies most remote.

"When a tree which requires much moisture (says Mr. Knight,) has sprung up or been planted in a dry soil, in the vicinity of water, it has been observed that much the larger portion of its roots has been directed towards the water; and that when a tree of a different species, and which requires a dry soil, has been placed in a similar situation, it has appeared in the direction given to its roots, to have avoided the water.

"When a tree (remarks Dr. Smith,) happens to grow from seed on a wall, (and he particularly alludes to an ash in which the fact actually occurred,) it has been observed, on arriving at a certain size, to stop for a while and send down a root to the ground. As soon as this root was established in the soil, the tree continued increasing to a large magnitude.

"The best means, perhaps, that a plant can possess of resisting the effects of drought, is a tuberous or bulbous root. The grass called *phleum pratense*, or common catstail, when growing in pastures that are uniformly moist, has a fibrous root, for it is locally supplied with a sufficiency of water; but in dry situations, or such as are occasionally wet, its root acquires a bulbous form, and thus instinctively accommodates the plant with a natural reservoir. And there are various other grasses, as the *alopecurus geniculatus*, or geniculate foxtail, that exhibit the same curious adaptation.

"Whence derive the young of every kind a knowledge of the peculiar powers that are to appertain to them hereafter, even before the full formation of the organs in which those powers are to reside? To adopt the beautiful language of the first physiologist of Rome.

The young calf whose horns
Ne'er yet have sprouted, with his naked front
Butts when enrag'd: the lion whelp or pard
With claws and teeth contends, ere teeth or claws
Scarce spring conspicuous; while the pinion'd tribes
Trust to their wings, and, from th' expanded down
Draw, when first fledg'd, a tremulous defence.

"So when caterpillars, observes Mr. Smellie, are shaken from a tree, in whatever direction they descend, they all instantly turn towards the trunk and climb upwards, though till now they have never been on the surface of the ground.

"The stalk of the convolvulus twines from the left or east by the south to the west, the face being towards the south: the *phaseolus vulgaris*, or kidney-bean, pursues the same course: while the honey-suckle and the hop take a perfectly reverse direction. Who will reveal to us the cause of these differences?

"We are told by Galen, that on opening a goat big with young, he found one of the young ones alive, which he hastily snatched up, and took it into a room where there were various vessels severally fitted for the purpose with wine, oil, honey, milk, grains, and fruits. The little kid first rose upon its feet and walked; then shook itself, and scratched its side with one of its hoofs; it next smelt alternately at all the dishes before it, and at last fixed upon and licked up the milk. In this case the sense of smell went distinctly in aid of the instinctive search after food, and determined the particular kind: so that the instinct and the sensation co-operated.

"Generally speaking, the principle of instinct is perfect and infallible in its guidance; there is, however, an occasional aberration, perhaps a playfulness in this as in every other part of nature. Thus the light of the candle is, by flies and various other insects, mistaken for the light and warmth of the sun, often to the loss of limb or even life itself. So the fleshy-fly and blow-fly (*musca carnifica* and m. *vomitoria*) are deceived by the smell of the carrion-flower (*stapelia hirsuta*,) and often deposite their eggs upon it instead of upon putrescent meat; in consequence of which the grubs die almost as soon as hatched, for want of proper nourishment."

Dr. Good thus beautifully closes his lecture on instinct, sensation, and intelligence.

"We can only assure ourselves that they are distinct powers, perhaps distinct essences; and we see them acting, as well separately as conjointly, for the general good. Under their accordant influence we behold the plastic and mysterious substance of matter, which we must be especially careful not to confound with themselves, rising from "airy nothing" into entity: ascending from invisible elements into worlds and systems of worlds; from shapeless chaos and confusion, into form, and order, and harmony; from brute and lifeless immobility, into energy and activity; into a display of instinct, feeling, perception; of being, and beauty, and happiness. One common design, one uniform code of laws, equally simple and majestic, equally local and comprehensive, pervades, informs, unites, and consumates the whole. The effect then being one, the mighty cause that produced it must be one also; an eternal and infinite unity—the radiating fountain of all possible perfections—ever active, but

ever at rest—ever present, though never seen—immaterial, incorporeal, ineffable: but the source of all mind, of all existences, and all modes of existence.—Whatever we behold is God—all nature is his awful temple—all sciences the porticoes that open to it: and the chief duty of philosophy is to conduct us to his altar; to render all our attainments, which are the bounteous afflations of his spirit, subservient to his glory; and to engrave on the tablet of our hearts this great accordant motto af all natural and all revealed religion, "in him we live, and move, and have our being."

(To be Continued.)

ART. CXVI.—*Method of Preserving Beasts, Birds, Fishes and the natural color in the Petals of Dried Flowers.*

Beasts.—Large beasts should be carefully skined, with the horns, skulls, jaws, tails, and feet, left entire; the skins may then be either put into a vessel of spirit, or else rubbed well on the inside with the mixture of salt, pepper, and allum, hereafter mentioned, and hung to dry. Small beasts may be put in a cask of rum, or any other spirit.

Birds.—Large birds may be treated as large beasts, but must not be put in spirits. Small birds may be preserved in the following manner:—Take out the entrails, open a passage to the brains, which should be scooped out through the mouth; introduce into the cavities of the skull and the whole body, some of the mixture of salt, allum, and pepper, putting some through the gullet and whole length of the neck; then hang the birds in a cool, airy place, first by the feet, that the body may be impregnated by the salt, and afterwards by a thread through the under mandible of the bill, till it appears to be sweet, then hang it in the sun, or over a fire; after it is well dried, clean out what remains loose of the mixture, and fill the cavity of the body with wool, oakum, or any soft substance, and pack it smooth in paper.

Fishes, &c.—Large fishes should be opened in the belly, the entrails taken out, and the inside well rubbed with pepper, and stuffed with oakum. Small fishes, reptiles, and insects, should be put in spirits. Butterflies, moths, and any insects of fine colours, should be pinned down in a box, or on a board, with the wings expanded.

The following mixture is proper for the preservation of birds and beasts:—One pound of salt, four ounces of allum, and two ounces of pepper, powdered together.

Flowers.—Nothing more is necessary than to immerse the petals for some minutes in alcohol. The colors will fade at first, but in a short time they will resume their natural tint, and remain permanently fixed. *N. E. Farmer.*

ART. CXVII.—*Abridged Translations from the Annals of the Horticultural Society of Paris.*—By the Editor. [Continued from page 107.]

NUMBER FOR AUGUST.

The first article in the August number, is an historical notice of nearly twenty pages, on *The Plantation of the Mountain of Saint Martin*; belonging to M. le Vicomte HERICANT de THURY, President of the Society. This extensive tract, when bought by M. de Thury, in 1784, consisted of meadows overgrown with weeds and alders, of hills covered with briers, of heaths, and of fallow grounds, the tillage of which had been neglected since the wars of the 15th and 16th centuries, when the mansion was pillaged and left in ruins. From the roughness of some parts, the clayey and boggy nature and sterilty of others, it presented obstacles to subjugation insurmountable, but to such men as M. de Thury.

By establishing nurseries, in which he collected plants, principally ornamental and forest, from almost every part of the world, particularly from North America, he has succeeded, after much patience, attention and perseverance, during 40 years, in making the domain one of the most delightful places, and one of the greatest rural curiosities in France. About 160 acres are now covered with the most rare, beautiful and valuable native and exotic trees, transplanted from his nurseries, and now in full and most successfull growth.

Report on the Culture and Uses of Maize. This article extends to about twenty pages, detailing experiments affording little or no information to those in this corn-growing country.

Trimming Poplars and Oaks.—M. Vetillant, calls his method a new one. It consists in trimming several times moderately, instead of cutting off all the branches you wish at one time. His method is founded on the fact that the leaves and roots reciprocally act, and are dependent on each other; and hence any disproportion between them, produced by transplanting or trimming, weakens this mutual action, and consequently injures the tree.

Journal of the Forests.—This is a periodical, devoted exclusively to the subjects of forests, giving all that variety of information which their importance demands. In Germany, where attention is given to this subject, there are several periodicals of this kind.

Caetus speciosissimus.—M. Camille Dupont can make this plant, young or old, even suckers or shoots of one year, produce flowers in abundance. Having had, by accident, some branches of one of his best stocks broken off in July, he cut off the bruised part neatly, and the next spring new shoots put forth from the angles, and produced many flowers, much larger than ordinary. He now treats all his Cactus in the same way. One not two feet in height, had on it at once twenty flowers.

New York Farmer.—The numbers of this work are announced as received in exchange for the Annals, from Mr. A. Halsey, Corresponding Secretary of the N. Y. Hor. Society. The September number of the Annals contains abridged translations.

NUMBER FOR SEPTEMBER.

The first article is a Report on the Roses cultivated by M. Vilent. Further than displaying an effort to distinguish species from varieties, the article contains nothing particularly interesting to the American horticulturist.

From a notice of some singular vegetable phenomina, we select the following.

Flowers from the Roots.—In a garden at Mantes, a floral shoot of a lilac came up from the root, at the distance of 5 ½ feet from the trunck, a month after the

defloration of the tree. The flower was just above the surface of the ground, in the form of a thick bud, which as it developed, produced five floriferous branches. After they had fully flowered, the whole had the appearance of a boquet of lilacs stuck into the ground. The flower was superbe, very regular, remained unusually long, and very fragrant.

American Oaks and Birch, particularly some species, are represented as succeeding in France better than those indigenous to that country.

Date Tree of Pharaoh, or bastard date, is cultivated, as says a correspondent of the Geographical Society of Paris, by a pastoral people of Asia, called *Baloutches*. The fruit, not altogether like the date, is dried and reduced to a flower, which is preserved during the winter, and used by the more wealthy to fatten their flocks, but forms the ordinary nourishment of the poor. The leaves are manufactured into various articles of merchandise. The pits or stones of the fruit are a considerable article of commerce, in the form of beads. The plants succeeds in cold localities.

The Cloque, a disease that causes the leaves of peach trees to curl and crisp, is destructive to this plant in Holland, so says the *Journal d'Agriculture* of that kingdom. The disease, known only about 50 years, is produced by sudden changes of temperature. Healthy seedlings avoid it best.

ART. CXVIII.—*Abridged Translations from the "Annales de l'Institute Horticole de Fromont."* By the EDITOR. [Continued from page 108.]

NUMBERS FOR JUNE & JULY, 1829.

These numbers are almost entirely taken up with botanical lectures, which are too long for insertion entire in our columns, and of a nature not easily abridged, without losing their interest. The following is the only article which we found, in a hasty perusal, applicable to our columns.

Vegetables exposed to the inundation of the Frise in 1825. The results of the observations, made by M. D. H. Beucker Andrex de Leeuwanden, are physologically interesting, as showing the varied effects of sea water on plants.

The coppice of oak, although in the water in the midst of summer, continued to increase without the least inconvenience. Mulberry, pear, peach and other deeply rooted trees, received no injury. The fruit of the peach-orange (pecher-orange), which is ordinarily insipid, had its flavor very considerably improved by the inundation. The vines on the contrary exhibited effects entirely different.—The grapes acquired a disagreeable, saltish taste. Gooseberries also were effected similar to the vine.

Apricot, apple, cherry, and beach trees, coppice of alder, birch, ash, elm and willow, were not able to be proof against the brackish water. Some, in making efforts to vegetate, thrust out shoots, but the trees finally died. Asparagus was not very sensible to the inundation, but strawberry plants, even when under the water a very short time, perished. Purslain, leeks, onions, celery, spinnage and sorrel never appeared so handsome. The *Atriplex*, *Chenopodium* and *Rumex*, have given to the plains a fallow-ground covering. This has also been the case with those of the graminеous class, *Festucaovina* and *maritima*, *Hordeum maritimum* and the *Poa maritima*.

[Many farmers are probably inclined to express discontent that they have had so much rain and cold as to jeopardise their corn. As a compensation for this, they should be reminded that the season has been unfavorable for insects, particularly for grass-hoppers.]

ART. CXIX.—*Grasshoppers in* 1820.

The grasshopper is an enemy to wheat, which, although it is seldom extremely injurious, yet sometimes increases in such a manner as to overwhelm and devour every thing before it. This was the case in some districts in the summer of 1820: the weather being extremely dry and warm, from the breaking off of winter, without one cold shower in May, which would probably have kept them within bounds; they grew very rapidly, and were so numerous as to be exceedingly troublesome, both walking and riding. The potatoe wines were in many instances devoured close into the ground: the grass, too, in many situations, was kept entirely down; the fields having a brown appearance. As soon as the buckwheat came up, they began upon it from the fences, and gradually encroached upon it towards the centre: in small fields it was all destroyed; but in large fields, as soon as the buckwheat was in blossom, they desisted; and which I attributed to the strong odour of the blossoms, for there was no weakness about them at this time. Many trees, both of the fruit and forest kind, were entirely stripped of their leaves: early in the morning the wheat was covered with them; every plant had as many as it could support from the ear to the root: at length the blades of the stalks were entirely eaten off, and the insects becoming now very large and heavy, the whole of my spring wheat was bent down to the ground, broken, and utterly destroyed. We attempted to cut it with scythes, but it was not worth raking up. Turnips were destroyed in the same manner, the leaves being first stripped to the fibres, and then the fibres themselves consumed. We tried in vain to drive them before us out of the turnip fields, by forming a long line with straw ropes; but they always returned. The thistles, mullens and the coarsest plants by the road sides, were turned into perfect skeletons by these rapacious insects. Amongst numerous observations which their so great abundance enabled me to make, the following is particularly curious, as it proves that the grasshopper of this country, under favourable circumstances, has all the faculties of the African locust; and indeed the grasshoppers here attain a size not very disproportionate to the African grasshopper, as I know from repeated observations of both kinds. It was observed that these insects which in the morning were trampling down the wheat-fields, generally disappeared towards noon, and it was taken for granted, that they were concealed from the hot sun, either at the roots, or in the wall of fences; a carpenter, however, in my employment, desired me one day to look through the branches of a tree towards the sun, and on my doing so, I perceived at an immence height what I took for thistle downs floating in the air: the prodigious number of them, however, fillled the air, as it were, and whirling about with rapid motions, and recollecting the thistle was not ripe,

undeceived me, and I perceived that they were in reality grasshoppers, mounted at immense heights into the air, in numbers beyond computation, and sailing about apparently in a circle. This induced me to watch them afterwards more narrowly: about ten in the morning, some of the males would rise about six feet from the ground, sustain themselves there by fluttering, and pour out a chirruping not very dissimilar to that of birds; they would then drop to the ground; this would be repeated by others; at length they would begin to rise, would fly horizontally for fifteen or twenty yards, and then wheel up into the sky; where, about noon, the same appearance which I observed the first time, was every day renewed. Towards the end of August they began to grow stupid, had a great many lice upon them, and in some places died in such quantities as to be perfectly thick, on the ground. I know of no remedy against their depredations: a greater scourge never existed. If the innumerable quantity of eggs laid this year, are permitted to come to maturity next summer, utter devastation assuredly awaits all our operations; but it is probable that the drought of last year will be compensated by an abundance of rain; that their larvæ will be destroyed, and themselves, with their destructive parents, will assist in restoring that plenty which was denied to us.—*Memoirs Board of Agricul.*

ART. CXX.—*Cultivation of Cherry Trees.*

The Cherry is a native production of the United States, but the kinds cultivated are all of foreign origin. It is a valuable fruit on account of its arriving at maturity in some of its sorts, so early in the season. They all succeed well, and bear abundantly in this country; and the fine, stately, well furnished, and regular growth of the cherry tree, renders it one of the finest of ornamental trees, independent of its delightful produce. Rows of these trees along the sides of lanes that approach to the dwelling house, present, at all times, a delightful prospect; and in the warm summer months, their teeming bloom of fruit and verdure, cheers the eye, delights the taste, and renders them altogether, trees well worthy of the cultivation of every man; nor are they more remarkable for their usefulness and beauty, than they are for the freedom with which they grow up and flourish with noble grandeur, in almost every kind of soil and situation, from the dry sandy knoll, to the strong heavy loam. As they are large stately growing trees, they should be planted at thirty or forty feet distance, if for an orchard; but on lanes, they may be planted much closer in the rows, as they will then form an earlier and closer shade, and the single rows, not being encumbered by others, as in orchards, never fail of yielding abundance of fruit. The early duke cherries, are sometimes trained on walls, or espaliers, like the plum; and in such situation, when the trees are in bloom and in fruit, their prospect is charming. But the grand theatre for the noble display of the noble elegance of the majestic cherry tree, is the open lawn; and the best mode for training it, the standard form. When planted in orchards, as is sometimes done, in the neighbourhood of large towns, the preparation of the ground and their management generally, is the same as that of the apple. When planted in lanes or grass ground, a circle of four or five feet diameter should be dug around each tree, and neatly hoed, and kept clean at all times; and every spring carefully dug with a spade. In such situations, it is generally necessary to erect a temporary defence around each tree, to prevent cattle from rubbing against or otherwise injuring them; and this is very conveniently done by driving down a couple of stakes, one each side of the tree, in a direct line with it. The stakes must be a little thicker than the stem of the tree, and in that case, pieces of board can be nailed on, to reach from stake to stake, which will keep them firm.

This is the cheapest, and as effectual a method of defending young trees from cattle, as any I have seen employed. The following is a list of some of our best sorts. The catalogues of this, as well as of all our other kinds of fruit, are now yearly increasing, by the introduction of new and valuable varieties from Europe, as well as by the enterprizing exertions of American horticulturists, in raising up new and vigorous race from seed, to supply the places of those whose natural period of existence seems to have been terminated.

LIST OF CHERRIES.

1. May Duke,
2. Holman Duke,
3. French Duke,
4. Arch Duke,
5. American Heart,
6. Ox Heart,
7. Black Heart,
8. White Heart,
9. Carnation,
10. Caroon,
11. Waterloo,
12. Black Eagle,
13. Black Tartarian,
14. Four to the Pound,
15. Elton,
16. White Orleans.

Wilson's Econ.

ART. CXXI.—*On the Culture of Currants.*

This is a very useful and interesting fruit, whether we view it as an article of domestic economy in diet, or as yielding a juice capable of being made into a wine, little (if any at all) inferior to that of the grape. And what renders it still more valuable, is the great facility and care with which it may be cultivated any where and every where in this country. It is certainly the most faithful and abundant bearer, with the least care bestowed upon it, of any of our cultivated fruits. But it is well worthy of a better treatment than is generally bestowed upon it. In England the plants are trained upon one stem like the gooseberry, and they may be done so in this country. But they are both more durable and productive when allowed to send up three or four shoots from the root, which however, should be kept free of side shoots, to a height of ten or twelve inches. The wood of the currant bushes after they are some years old are apt to be infested with a worm that enters into the pith which although apparently of no great importance, yet by being destroyed with the worm, the limbs soon decay and die. And even their main stem, although it seldom dies at once with the affected branches, becomes unable to supply, by new shoots, the places of those that are killed; and the plant, unless renewed by succour from the root, soon becomes useless. This seldom happens, for the root which never seems to be affected, is always ready to send up substitutes. The advantage of having three or four main stems from the root, instead of one, is, that when any individ-

ual stem becomes affected, it may be cut off to the root, and a new stem allowed to arise in its room; and in this way the whole plant may be renewed without materially altering its appearance, or diminishing the usual supply of fruit. The tops of currant bushes are not so apt to become overstocked with wood as the goooseberry, yet their branches should always be kept open and distinct from each other; for when allowed to become too close, the fruit is neither so large nor so good flavoured. The plants should be set out about the same distances as directed for the gooseberries; and if the ground around them is cultivated with equal care, they will well repay the labour, by the improvement of their fruit both in quantity and quality. There are three principal kinds of the currant cultivated for their fruit—the red, the white, and the black; and of each of these sorts there are several varieties, all good. The red sorts are the most valuable for most purposes; but the jelly made of the black currant is considered to be of the greatest service, and a valuable medicine in cases of sore throat.

ART. CXXII.—*Col. Powel's Sale of Improved Durham Short Horned Cattle.*

On Wednesday the 16th. inst., the sale of a part of this gentleman's stock of *improved Durham short horned Cattle*, imported or bred by him, took place at Powelton on the Schuylkill. Before the appointed time of sale, the lawn near the house was well filled with respectable visitors, who came either to admire or to purchase. Among the company we observed the Baron de Krudener, the Russian Ambassador, Gen. Eaton, Secretary of War, the Hon. Mr. Lloyd, of Mass. Dr. Hosack, and G. W. Featherstonhaugh, Esq. of N. Y. Mr. Walcott, of Conn., Dr. Chiscoe, of Va., and a number of other distinguished agriculturalists from various other parts of the Union.

The first cow offered was Volanto, a beautiful red and white, 5 years old, bred by J. Whittaker, Esq. a gentleman near Otley, Yorkshire, and imported by Col. Powel, in July, 1826, which was sold to B. D. Perkins, Esq. for 305 dollars. The next cow, Annabella, 6 years old, light roan, was bred by Mr. Booth in England, and imported with the foregoing, sold to W. H. Freeman, Esq. for 310 dolls. Stately, imported in 1822, sold to W. Painter for 365 dolls. Virginia, 9 years old, begotten in England, from the stock of the celebrated J. C. Curwen, Esq. M. P. at Yorkshire, sold to W. Wright, for 240 dolls. Marcia a heifer of 7 months, by B. Malcom, and Stately, sold to Thomas Rotch, Esq. for 240 dolls. Zenobia, a beautiful red cow, 7 years old, imported by Col. Powel in 1828, bred by W. Woodhouse, sold to D. Thomas of Maryland, for 410 dolls. Sarah, 6 years old, imported last year, was also bought by D. Thomas at the same price. Nine other cows were sold to Messrs. Dager Freeman, Perkins, Mitchell, Sharp, S. Allen, C. Barnets, J. P. Thompson, and W. Elmer, at various prices, ranging from 201 dolls, the lowest, to 330 dolls. the highest. Five fine bulls were also sold; the first, Bolivar, 5 years old, red and white, bred in England by W. Whitaker, and imported by Col. Powel, in 1826, was purchased by B. Chew, Esq. for 405 dollars. Tecumseh, 2 years old, bred by Col. Powel, from B. Malcom and D. Desdemona, was purchased by D. Thomas, for 510 dolls. Diego, 12 months old, purchased by M. Eyre, Esq. for 300 dolls; Orlando, 11 months, purchased by J. P. Thompson, Esq. for 360 dolls; Memnon, 3 years old, red and white, bred by Mr. Whitaker, in England, imported in 1827, purchased by Mr. Briscoe, for 405 dolls.; Romp, a bull calf by Tecumseh, 6 days old, was purchased by B. D. Pickering, Esq. for 110 dolls., and Gipsey, a heifer, 9 months old, was purchased by D. Elmer, for 200 dollars.

Thus we find out of the above list, that 2 bulls and 3 cows sold together for 1735 dollars! And deducting two only from the total sale, viz; Yorkshire Belle, a cow, which was sold with a knowledge and understanding of its being disordered, for 151 dollars, and the six days' old calf above mentioned, the sale of the remaining 21 head will average 320 dollars each.—*Philad. U. S. Gaz.*

ART. CXXIII.—*Horticultural and Botanical Establishments in the vicinity of New-York—Nurseries of Mr. A. Smith at Lodi, near Newark, N. Jersey, and Seed store in Broadway, New-York.* [By the EDITOR.]

After leaving the rural and celebrated Hoboken, in going to Lodi, nothing particularly interesting meets the eye, until descending the high grounds of Bergen, when the salt meadows formed by the rivers Hackensack and Passaic, spread out to view in an extent of many miles. The most novel and singular sight that strikes the traveller, is the vessels navigating the above rivers. At the distance of fifty or more rods, the water and the hull of the vessel are wholly concealed, and the inflated canvass, the waving grass, and now and then the peeping head of a sailor, are the only objects seen;—the whole giving us the impression that either the frolicsome sons of Neptune had taken it into their heads to plough the grassy main, or some discovery in these times of wonderful improvement, had enabled them to sail on the green turf, as well as on the rolling deep.

Across these meadows is an excellent turnpike road, about four miles of which is lined on both sides with trees, principally the common willow. They were set out four or five years ago, at thirty feet distant, and already afford a greatful shade. In a few years, they will entirely overshaddow the road, and make it one of the most delightful for a summer ride, of any in this section of the country.

These meadows, embracing many thousand acres, produce immense quantities of salt hay, which is carted many miles into the neighboring country, and carried in vessels to Long Island and Connecticut. Within a number of years past, a considerable portion of these grounds have been banked in from the access of the sea water with a view of converting them into arable land. Great expense has been incurred, yet we believe the success has been such as to warrant the further attempts of the enterprizing proprietors. Unquestionably, these lands would become immensely productive and valuable, when rendered tillable. The demand for salt hay will, we are inclined to think, decrease in proportion as farmers make use of salt for their cattle; and hence the greater importance of converting these extensive tracts into productive grounds.

The Nurseries of Mr. Smith are on the elevated ridge, between the Hackensack and Passaic, near the

banks of the latter, where it winds along the eastern part of the flourishing village of Newark, about nine miles from the city of New-York. The area comprises 60 acres, affording every variety of aspect and soil requisite for the production of plants, capable of being matured in this latitude and climate. More than 25 acres are devoted to the apple orchard, five to the peach orchard, and a corresponding proportion to the raising of fruit and ornamental plants, seeds, and flowers. A few acres are meadow, producing salt hay and pasturage for cattle and horses.

The seed store of Mr. Smith is at 372 Broadway, and is not, we believe, surpassed in reputation and for the neatness with which it is kept, by any other in our city, and only by one for the amount of stock.

Among the objects that attracted our attention, when we visited Mr. Smith on the 12th. inst., were his fine large gooseberries, some of which were bending the tender branches of young plants brought this spring across the Atlantic. A full bearing bush of the choice kinds is sold for the very moderate price of 25 cents, and yet it is probable that four fifths of the farmers, and those owning small portions of ground, have only the common kinds, and these in most instances, entirely neglected. A little public spirit and care on the part of those owning grounds, would supply our markets most abundantly with this fine berry. Mr. Smith obtains three dollars per bushel for his, when the common kinds bring only one dollar. Mr. S. has met with much success in the cultivation of strawberries. One kind in particular, struck our eye—varying from two to three inches in circumference, something of a long barrel shape, dark skin, very white pulp, and a flavor partaking of the pine-apple.

The cider made at Newark and its vicinity, has long been held in high repute. Its superior quality is almost entirely attributable, in the opinion of Mr. S., to a selection of those sorts esteemed good for cider, careful culture of the trees, attention to the cleanliness and maturity of the fruit when ground, and to that care throughout the whole process, which every person observes, when he wishes to bring a good article into market. The principal kinds in the Lodi orchard, are the Harrison and Campfield, which Mr. S. thinks enjoy a more congenial soil in that vicinity, than in most other sections of the country. Although cider at this season of the year is not in great demand, yet Mr. S. obtains six dollars per barrel.

Mr. Smith is decidedly of opinion that peach trees should not be planted in succession on the same ground; and hence new locations are taken for his nurseries. The peach is a delicate exotic, liable to many diseases, and affected by slight variations in temperature and soil, and consequently requires, for successful culture, much experience and close observation.

In raising potatoes at Lodi, we observed one practice worthy of imitation. After having been planted in drills sufficiently long to begin to vegetate, the ground is harrowed. In consequence, the potatoes come up less peakedly, the roots are at a more uniform depth, the weeds are thus kept down, and the ground in a better state to be properly managed.

The honey-locust is prefered by Mr. S. to the hawthorn for hedges. We should be of the same opinion, if the experiment at Lodi was a fair one, of which we have no reason to doubt.

Among other objects that drew our attention, was a patch of perennial rye grass, and two or three acres of beautiful white flint wheat, both intended for seed; a nine angular cactus eight or ten feet high, salad beets, a beautiful collection of heaths from Scotland, the American spindle tree, *(Euonymus atropurpureus,)* extraordinary fine double sweet-williams, and splendid roses. There are also at the Lodi Nursery, in fine preservation, the plants sent from Campeachy by H. Perine Esq. to Dr. Mitchill, and described in Vol. 2 p. 139 of the N. Y. Farmer. Mr. Smith is of the opinion however, that they will not succeed without protection in this latitude, but is confident that entire success would attend their cultivation in the Southern States. The valuable uses made of them, particularly of the Henequen from which the Sisal hemp is made, render it important that experiments should be tried in the more southern sections of our country.

The horticultural establishment at Lodi, although Mr. Smith labours under the disadvantages of being absent in New-York the greater part of the time, is a beautiful rural place, and is kept in neat and fine order. Around the dwelling are fruit and ornamental trees, indigenious and exotic, exciting in the mind of the visiter, the idea of retirement, comfort, content, and happiness. The green-house joins the dwelling in therear, atright angles. Two of the windows of the parlour open directly into the green-house, affording in the frosty season, a beautiful display of nature's most delicate and most brilliant productions. From the others, a fine view is had of the flower garden, and the road in front. We would wish to make one suggestion of improvement,—the repairing, or concealment by trees, of the building formerly occupied as a tenanted dwelling, but now used as a drying house for seeds, and exhibiting its broken lights. From the road, it still has the appearance of a dwelling, whose inmates struck with poverty, have neither industry nor a taste for rural embellishment.

From this charming spot, when

——'fades the glimm'ring landscape on the sight',

we strolled away across the Passaic, and spent in the sober yet polished village of Newark, 'the day of rest', when

"Mute is the voice of rural labor, hush'd
The ploughboy's whistle, and the milk maid's song.
The scythe lies glittering in the dewy wreath
Of tedded grass, mingled with fading flowers,
That yesterday morn bloomed waving in the breeze:
The faintest sounds attract the ear,—the hum
Of early bee, the trickling of the dew,
The distant bleating, midway up the hill.
Calmness seems thron'd on yon unmoving cloud.
To him who wanders o'er the upland leas,
The black-bird's note comes mellower from the dale,
And sweeter from the sky the gladsome lark,
Warbles his heaven tun'd song; the lulling brook
Murmurs more gently down the deep-sunk glen;
While from yon lowly roof, whose curling smoke
O'ermounts the mist, is heard, at intervals,
The voice of psalms, the simple song of praise.
With dove-like wings, peace o'er yon village broods:
The dizzing mill-wheel rests; the anvil's din
Has ceased; all, all around is quietness."

In this place there are many private gardens, well supplied with a considerable variety of choice fruit. Much attention too, is bestowed on their front door yards, in embellishing them with shrubbery and flowers. Some of them are very tasteful, pretty, and showy. A commendable spirit is manifested in set-

ting out trees along their side walks. There are also in various parts of the village, quite a number of large venerable trees, that must have afforded shade and shelter to our fathers, in the days when they struggled for that liberty and security, which, under providence, they were enabled to bequeath us.

As soon as the succeeding

'rosy fingered morn,
With blushes on her face
Peep'd o'er the azure hills,'

a ride of four or five miles, on horse back, in company with a young lady, (a most excellent prescription for a valetudinarian bachelor,) sharpened the appetite for an early breakfast, preparatory to taking the first 'steamer' for this noisy and care producing city.

ART. CXXIV.—*Proceedings of the Inspecting Committee of the New-York Horticultural Society.*

May 25th. Mr. Law presented from the garden of J. J. Astor Esq., a quantity of early potatoes, 6 of which weighed 3 lbs. 11 oz., and 4 heads of cabbage, weighing 4 lbs. 9 oz., and two cucumbers, one 9, and the other 12 inches long.

Mr. Coady, a very fine cauliflower, 1 lb. 10 oz. Mr. C. commenced cutting cauliflowers on the 1st of May; also green peas from the open ground.

Mr. Wilson, ripe strawberries, and a variety of flowers.

Mr. Neale, purple and white Viola grandiflora, China pinks, 3 kinds of herbaceous pæonies, and a variety of flowers.

Mr. Cooper, a white seedling Rose.

June 1st. Mr. Hogg, 30 kinds of beautiful flowers, among them, a double yellow seedling Rose, and a Malope trifida, flowering for the first time in the U. States.

Mr. Floy, a fine collection of flowering plants, a double white Chinese Pæony, Rose of the four seasons, and many others.

Mr. Wilson, Pelargonium speciosum.

Mr. Oakley, ripe cherries.

Mr. Coady, from Com. Chauncey's garden, a cauliflower, 2 lb. 4 oz, a quart of strawberries, 12 of which 2 oz. 20 grs., and a quart of green peas well filled.

Mr. Still, 2 heads of Simpson's curled Sallad, 4 lbs. 2 do. winter green do., 2 lbs. 4½ oz.

Mr. Cook, a branch of Nectarines, loaded with fruit, and a specimen of fine gooseberries.

June 8th. Mr Still, early cherries.

Mr. Warner, do.

Mr. Coady, a quart of excellent strawberries, one weighing 4 dwts. 15 grs., and 12 2½ oz. 6 grs., and 2 cauliflowers 6 lbs. 17½ oz.

Mr. Law, gardener to J. J. Astor, one cauliflower 8 lbs. 11 oz., one do. 4 lbs. 7 oz., and 2 early York cabbages 6 lbs. 6 oz.

Mr. Lorillard, the President, a very large Lemon, from the garden of Mr. James Benedict, Tarrytown, and 14 early Carrots, 13 oz., from the garden of C. Meir, Esq.

Mr. Neale, 4 kinds of Roses, Pæonia Whitleii, and Amaryllis formosisima.

Mr. Hamilton, double white Rocket.

Mr. Morrow, nine varieties of Roses, two kinds of Geraniums, and other flowers.

Dr. Hurriot, Coal Black Rose, from the garden of J. W. Oddie Esq.

Mr. Warner, six kinds of Roses, and other flowers.

Mr. Cooke, the St. Lawrence Rose.

Dr. Ireland, Saxifrage, or Pride of London.

June, 15th. Mr. Francis Cooper presented a quart of Strawberries, one of which weighed 6 dwts. and 20 grs. and measured *four* inches in circumference; 1 do. 5 dwts. 16 grs; one dozen weighed 3oz. and 2 dwts. to which the premium will be awarded.

W. R. Cooke—One dozen Napoleon Gooseberries, weighing 4½ oz. 5dwts. 18 grs.

Wm. Neale—Seedling Pinks and Amaryllis formosissima.

Wm. Wilson—A great variety of Flowers.

Samuel Morrow—Do. do. do.

Geo. Still—Cherries and early Beets.

Samuel Morrow—Two heads of Lettuce, weighing 1 lb. 5 oz. and 1 lb. 7 oz.

Thomas Coady, from Com. Chauncey's garden, Navy Yard—Two Cauliflowers, weighing 4 lb. 8 oz. and 4 lb. 2 oz. and a specimen of early Beets.

June 22nd. Dr Hosack, from his residence at Hyde Park—A Muskmellon, 14 inches round, and a large Watermellon, both perfectly ripe.

Francis Cooper—A specimen of Gooseberries, one of which weighed 11 dwts.; one dozen weighed 5½ oz 5 dwts. 19 grs., the largest ever exhibited to the Society.

Wm. Wilson, from Murray Hill Nursery—A China Rose, taken from a plant the *seed* of which was sown *this spring*.

Mr. Floy—A great variety of Roses, about 25 kinds.

Alexander Smith—Carnations, and a variety of other flowers.

Mr. Neale—A variety of fine Flowers.

Mr. Oakley—A fine variety of Flowers, among which was Cestrum nocturnum.

D. S. Lyon, Esq. presented the Society with about forty kinds of seed from Holland.

Wm. Wilson presented a boquet of flowers four feet high, and comprising about 50 kinds, which was, by a vote of the Committee, presented to Mrs. Niblo, and was exhibited in the saloon in the evening.

June 29th.—From Mrs. Winter, Flushing, one doz. gooseberries, 6½ oz. 8 dwts.

Mr. Whitemore, by Mr. Smith, one doz. gooseberries, 5 oz. 17½ dwts.

Mr. S. Morrow, a plate of gooseberries.

From the garden of Mr. W. L. Vanderwoort, very fine cherries.

Mr. J. Mathewson, 4 Beets, 2 lbs. 12 oz., 2 heads Imperial Lettuce, 2 lbs. 9½ oz., 2 do. Coss do. 4½ lbs. 2 do. do. 3 lbs. 1 oz.

Mr Still, a fine collection of flowers.

Mr. Oakley, six kinds of carnations, and broad leaved Myrtle.

Mr. Neale, Carnations, Picotees, and Clove Pinks.

Mr. Hogg, 4 kinds of Carnations, and a hardy seedling Rose.

Mr. Prince, a beautiful collection of flowers.

Mr. Oakley, a very handsome boquet of wild flowers, collected on Harlaem commons.

Mr. Cooke, a collection of Flowers.

W. R. COOKE, Sec'y.

Remarks.—By arrangements made, Mr. Niblo is about erecting in his garden, a building, suitable fo the purposes of the society.

ART. CXXV.—*Miscellaneous.—Original and Selected.*

Loubat Vineyard.—On the 30th of the present month, we visited Mr. Loubat's vineyard. Of the 60,000 permanent stocks, and of the same number principally from cuttings designed for sale, we did not discover a sickly plant, and considering the infertility of the soil, without having been manured, their healthiness and vigor of growth far exceeded our expectation. The fruit is well formed, affording the enterprising proprietor a prospect of having four or five thousand pounds of grapes, a greater part of which he intends to dispose of in our city markets.

At a future day, when we have eaten of the fruit, we purpose giving a more full description of this vineyard, and a more minute account of Mr. L's management. We recommend to all those interested in the success of foreign vines, to visit the vineyard and see for themselves.

Training the Vine.—Dr. G. W. Chapman of this city, observes that the vine in its natural state, seldom or never throws out bearing shoots, until it reaches the top of the tree on which it ascends, when the branches take a horizontal or desending position. From this fact, he considers horizontal training preferable to that in the fan shape. From the experiments he has made, he has found that the shoots coming from those parts of the branches bent downwards, are more productive than from those ascending.

London Horticultural Society.—By the last number of Louden's Gardener's Magazine, we learn that this society is in debt $100,000. This immense debt has been incurred by an injudicious purchase of a garden, the want of economy and proper supervision in its management, and the great expense attending the publication of their Transactions. The weight of the odium appears to rest on Mr. Sabine, to whom, notwithstanding, it is acknowledged that the progress of horticulture for a number of years past, is much indebted. The debt has been increasing from year to year, unknown to the members generally, from too much confidence in those who had the control of the expenditures, and from too much courtesy and delicacy on the part of those whose duty it was to audit the accounts.

Exhibition of the Pennsylvania Horticultural Society.—A Philadelphia paper, in speaking of this exhibition which took place on the 26th ult., says that "the means of equalling it in richness and variety, are not to be found elsewhere on this continent." Among the plants were the *Coffee tree*, the *Tea* plant, the *Cinnamon* tree, the *Camphor* tree, the *Gum Elastic* tree, (Ficus elastica,) the *Banana*, the *Sugar Cane*, New Zealand flax (Phormium tenax,) the *Mahogany* tree, the Cream nut (Carolinea princeps,) the *Olive*, the Black Pepper tree, the Mango. Of the plants which were objects of curiosity, for their rarity, the Philadelphia Gazette mentions the Ixora coccinea, Gavetta Indica, Ficus australis, Ficus vestita, Pandanus odoratissimus, Testudinaria elephantopus; Cookia punctata, Metrosideros saligna, Strelitzia regina, Olea excelsa. The early potatoes, fine cauliflowers, large cucumbers, cherries, gooseberries, &c. &c. made no bad display by the side of these exotics. A specimen of excellent sewing silk, of domestic manufacture, bearing the boastful label of *Conecticut against the world*, was matched with an enormous bunch of onions, with the motto, *Pennsylvania against Connecticut.*

On Taming and Breaking Horses.—A writer in the American Farmer, observes that Mr. Drinnen, a celebrated horse manager, subdued the most wild and ungovernable horses by frightening them. "Drinnen," says the writer, "was employed to break a horse, that had resisted the efforts of several persons, who earn their subsistence by breaking horses. His mode of breaking him was thus described to me by an eye witness. The horse was with great difficulty got into a small stable, when D. entered and closed the door; the horse would not at first let him approach him. D. began by rolling an old sugar hogshead at him, at the same time speaking to him in a loud voice; by degrees, he got near enough to caress him, and whenever the horse showed signs of impatience, he would roll the hogshead at him again, which appeared to alarm him greatly. In less than half an hour, he rode about the yard without saddle or bridle. I have taught several horses that have never been touched before, but to brand them, to follow me, to come to me at the crack of the whip, &c. This is the mode I used: I took the horse into a small stable, and commenced chasing him round, cracking the whip, and calling to him very loud, so that he might know my voice, occasionally caressing him. When somewhat gentled, I put on a halter. I then would tell him to *come here*, at the same time pulling him towards me with the rope; if he does not come, I crack the whip again, giving the word, and when obstinate, I touch him lightly behind with the whip, taking care to caress him whenever he shews a disposition to advance. I have tried that plan on several very wild horses, and never found more than half an hour necessary, to make the wildest follow me like a dog. I would also observe that in breaking a horse that has not been used to being handled, rubbing your hand on his nose and mouth, after pulling it under your arm, especially when perspiring, has a very good effect, for nothing is so alarming to a wild horse as the scent of a human being.

Improvement of the Breed of Horses in France.—The Duke de Guiche has lately published a very interesting paper on the improvement of the breed of horses, in which he proposes to confine them to two distinct classes; one, of light horses, to be obtained by crossing with English horses and Arabian mares, which class would include race-horses, cavalry-horses, coach horses, and all those employed in post work and light agriculture. In the second class he includes waggon horses, horses for heavy agricultural work, and all horses for slow and heavy draught. He proposes to establish for each of the two classes a number of haras, (studs,) proportioned to the extent of the respective demand. The duke advances many sensible arguments in favour of his plan, and proves that, as the soil and climate of France are decidedly favourable to the breeding of horses, there is no reason why, with judicious crossing, they should not be quite as good as those of Great Britain. The plan has been taken up warmly by the French government, and it is expected that it will be carried into almost immediate execution. —*Lit. Gaz.*

Beet-root Sugar.—The manufacture of sugar from beet-root is still making way rapidly in France, with almost daily improvements. Within the last fortnight

(Nov. 1st.) a manufacturer near Paris has taken out a patent, by which he undertakes to diminish the time hitherto required for completing the process at least one-third.

We are not yet acquainted with how this speculation will turn out as an agricultural object. An estimate must be made of the value of the sugar extractable from an acre of beet, compared with the value of beef, milk, or butter obtainable from the same crop. In France, where both rent and labour are moderate compared with the price of either corn or sugar, the project may turn to profit—more especially as that country has but few sugar colonies to care for. But while Britain is supplied with that article so reasonably by her own colonies, it is not likely that they will take so much beef, and pork, and wool for their sugar, that any land in this country can be given up for the purpose of growing beet for the manufacture of it at home. —*Ibid.*

Labouring Farm.—The Delaware Gazette mentions, that the Education Society of the Episcopal Church, in Philadelphia, have purchased the farm of Mr. Hemphill, about two miles from Wilmington, on the Philadelphia road; where they mean to establish a *self-supporting school.* The pupils will be exclusively of that class of youths who are designed for the ministry. The farm, which approaches to one hundred acres, is to be cultivated by the students; who will be employed in agricultural or other labor, at least four hours in the day.

A New Enemy to Wheat.—One of the most respectable and extensive farmers in Lampeter township, Lancaster County, informs the editor of the Lancaster Journal, that, as near as he can judge, the head of one stalk out of every fifteen, in one of his wheat fields, has been cut off by the pale green worms about an inch in length. They make their appearance in the evening, ascend the stalk, and cut it off a short distance below the head during the night, and disappearing almost altogether, before or about daylight in the morning. Another of his wheat fields has sustained some injury from the same cause. To what extent this new enemy may carry its ravages, cannot be foretold.—*Baltimore Chronicle.*

Vegetable Barometers.—A French paper states that numerous plants afford new and convenient hints concerning the weather, which it may be agreeable to be informed of. Chick-weed is said always to close its blossoms some time before a rain; so that when they are observed open, one may calculate on dry weather for at least several hours As long as they continue to unfold and display themselves, the whole day may be depended upon. If, on the contrary, the flowers withdraw themselves in their green envelope, the pedestrian need wish no better hint to take his umbrella in his walk. All kinds of clover, we are further informed, close up their leaves at the approach of a storm; and this is so marked a characteristic of that family of plants, that they are often denominated "the farmer's barometer." The same practice prevails in tulips, and the greater part of the flowers with yellow blossoms, in preparation for rain. Wild sorrel does the same in France, and in other countries the mountain ebony, the acacia, and sensitive plants generally do the same.

Pyrus Aucuparia, "or mountain ash, says Dr. Lardner, affords clusters of scarlet-red berries, which have a remarkable acerb and bitterish taste. Yet they resemble grapes in containing sugar, and natural yeast in the due proportion to produce perfect and spontaneous fermentation. Having expressed a quantity of its juice, I left it to cement; and when the wine was perfect, it was distilled, and an excellent brandy obtained." A gallon of the juice produced half a pint of spirit, which was moderately strong.

The Symphatum Asperrima.—This plant has also been recommended to the notice of farmers as a forage plant, by Mr. D. Grant of Lewisham. It seems this plant is very much relished by cows—is a species of the common comfrey, very often met with on the banks of wet ditches in many parts of England. The rough comfrey (that recommended) has hitherto been a garden plant, and there grows luxuriantly, throwing up many leaves, nearly as large as those of a dock.—It has also several branching stems, rising three feet high, bearing tufts of purple and blue flowers. It certainly yields a heavy cut of herbage—may succeed spring tares—and if found as suitable to the constitution, as it is said to be to the palate of milch cows, it may, in some situations, be an useful plant. We shall endeavour to get further information concerning it.—*British Farm Mag.*

Cape Jessamine.—The deleterious effects arising from eating the flower of the Gardenea plant, or Cape Jessamine, were evinced yesterday afternoon in the case of a female child, whilst walking in a garden near the city. The person affected has been in violent convulsions ever since, and apprehensions are entertained of her life.—*Charleston, May, 29th.*

Elder leaves put around the roots of peach trees, is recommended as a perfect antidote for the injury arising from worms.

Silk Culture.—Several thousand Mulbery trees, says the Troy Budget, have been planted in that vicinity;—Dr. Corning, and Mrs. Pawling, are each feeding several thousand silk worms.

American Silk.—We learn from the Fayetteville, N. C. Observer, that James Smith, Esq. of Bladen county, will have at least *one hundred* pounds of sewing silk, besides a quantity of floss, worth about $700, the product of 200,000 worms, this season, attended by a few small negro children. Let this be an encouragement to others, to engage in this profitable business. —*American Farmer.*

Strawberries.—J. Buel, Esq. states in a communication to the Albany Argus, that he picked a pail of strawberries in his garden on Monday, which had an average circumference of three inches each. Some of them were four inches, and one four and a quarter inches. Sixty three, divested of their hulls, weighed a pound. They are the Methven strawberry, and were procured in 1825 from the London Horticultural Society. Of another kind, the Downton, procured at the same time, the berries are frequently 4¾ inches in circumference.

Currants.—The French are about to introduce into Corsica, the culture of the raisin de Corinth (currants,) for which purpose a thousand plants have been imported fron the Morea. It is thought by the best horticulturists, that the climate of Corsica is well adapted to the growth of this excellent grape.—*Lit. Gaz.*

Cattle in Illinois.—The Illinois Courier, published at Springfield, Illinois, states that within the last four weeks, near 2000 head of beef cattle had been

driven through that place for eastern markets, and that the attention of farmers in that part of the state, is so much devoted to the raising of cattle, that a very great proportion of the eastern states will, in future, be furnished by them. "One of the droves of cattle," says the Courier, "which passed through here, of about 300 head, were all to a few, purchased in Calhoun county, and the others were mainly collected in the western counties, from St. Clair, North. In the county of Calhoun, we understand there does not exceed one hundred voters, allowing the cattle which were purchased to have cost $10 each, there must have been left in the county, from the sale of this single article of its produce, $30 to a voter. This is making money plenty.

Mammoth Ox.—The Newport Herald, R. I. states that an ox, raised by Mr. Wm. Bateman, of that place, weighed as follows; viz: fore quarters, 550, 561—hind quarters, 459, 470—tallow 241—hide 160—total 2430 lbs. The ox was seven years old, and when alive weighed 3,000 lbs.

A Cow, in this town, owned by *Dr. Barret*, has given milk, and made butter, after the following schedule; she has been milked for the last fortnight, every eight hours, and at each milking, has yielded a pail-full measuring ten quarts, the weight of milk, averaging daily forty-nine and a half pounds. Her milk has yielded daily, two pounds five ounces of butter, making thirty-two pounds, six ounces, in fourteen days; from one milking alone, *one pound and six ounces* was made, which will give *four pounds and two ounces of butter in one day from one Cow!* the butter was of a superior quality, and sold for a shilling per pound, while the usual price in the village has been but ten cents. —*Northampton Courier,*

The Farmer.—It does one's heart good to see a merry, round faced farmer. So independent, and yet so free from vanities and pride; so rich, and yet so industrious; so patient in his calling, and yet so kind, social and obliging. There are a thousand noble traits about him which light up his character. He is generally hospitable. Eat and drink with him, and he won't set a mark on you and sweat it out with a double compound interest, as some I have known will; you are welcome. He is generally more honest and sincere—less disposed to deal in a low and underhand cunning than many I could name. He gives to society its best support—is the edifice of government—he is the lord of nature. Look at him in homespun and gray-black, gentlemen; laugh if you will; but believe me, he can laugh back if he pleases.—*Anon.*

To destroy Slugs.—I have always remarked that slugs will attack the leaf of a somewhat withered cabbage, in preference to those in a more thriving condition. When I plant out a bed of cabbages, therefore, I strew the leaves that I cut off all over the bed, and the slugs will lie under them, and feed on them in the shade. Every day or two I have the leaves gathered up and given to the pigs, and then strew more leaves; and so on, till I get rid of the slugs entirely.

Caterpillars.—A gardener at Glasgow, having observed that a piece of woollen cloth which, blown by the wind, had accidentally lodged upon a gooseberry bush, which was soon covered with Caterpillars, took the hint of putting pieces of stuff upon other plants infested with these insects; the caterpillars took refuge upon them during the night, and in this easy way the bushes were soon cleared of then.—*Silliman's Journal of Science.*

Raising Apple trees from cuttings.—A horticulturist in Bohemia has a beautiful plantation of the best sort of apple trees, which have neither sprung from seeds nor grafting. His plan is to take shoots from the choicest sorts, insert them into a potatoe, and plunge both into the ground, leaving but an inch or two above the surface. The potatoe nourishes the shoot whilst it pushes out roots, and the shoots gradually spring up and become a beautiful tree, bearing the best of fruit without requiring to be grafted.

Tar for Sheep.—A gentleman who keeps a large flock of sheep, assures us that during the season of grazing, he gives his sheep tar at the rate of a gill a day to every twenty sheep. He puts the tar in troughs, sprinkles a little fine salt over it, and the sheep consume it eagerly. This preserves them from worms in the head, promotes their general growth, and is supposed to be a specific against rot.

Schools in Auvergne.—Mademoiselle d' Orleans, sister of the Royal Duke, has a seat at Raudan, in Auvergne, where the princess has established a great number of benevolent institutions. Among them are a lace school for girls; a school of drawing and elementary architecture for workmen; an evening school of mutual instruction for girls; a gratuitous pharmacy, and a school of mutual instruction, for all the children of Raudan and the environs.—*Galignani's Messenger.*

Agricultural Institute.—We observe with pleasure, that Anthony Morris, Esq. is about commencing his long contemplated institution for agricultural education. The school of the Rev. Wm. Chaderton, having been removed from Burlington, N. J. to Bolton farm, Bucks county, Pa. Mr. Morris has connected his agricultural school with that seminary, and the whole is now to be styled a "*Classical, English and Agricultural Institute.*" The agricultural department, however, will have no further connexion with the course of instruction of the other departments, than, as it will furnish to such of the students in them as may wish to avail of it, a substitution of rural and useful employments, for the undisciplined exercises which usually occupy the intervals of study; while these departments will afford to the agricultural students, an opportunity of acquiring such portions of a liberal education as may be desired. The plan of this agricultural school, is upon the system of Emanuel de Fellenberg, whose institution at Hoffwyl, in Switzerland, is so justly celebrated, and which was described in the Amerıcan Farmer, vol. 9, pages 25, 34, 50.

Terms.—1. It is required that the age of pupils at entrance should not exceed twelve years.

2. The charge for the classical and English branches, boarding, washing, and mending of clothes, is $210 a year for each pupil, payable semi-annually in advance.

3. The charge for the agricultural department, each pupil, $10 a quarter. For the French language, do. Spanish, do.

4. Books and stationary, and all other incidental expenses, will form an additional charge.

5. Each boy, at entrance, must bring with him a small bedstead and mattress, with bed clothes and towel.

6. The use of pocket money will not be allowed the boys in this Institution.

7. There will be two vacations in the course of the

year, one of a fortnight's duration, the other of four weeks; the former to commence on the first day of April, the latter on the first day of September, except either of those days should happen to fall on a Sunday, in which case the vacation will commence a day later.

Letters will be addressed, postage paid, to the Rev. *William Chaderton*, P. O. Bristol, Pennsylvania.

The Annual Fair of the Hamilton County Agricultural Society, of Ohio, was held on Thursday and Friday, the 10th and 11th of June. Notwithstanding the very unfavorable state of the weather, in the early part of each of those days, the exhibition was well attended; and the spirit and zeal manifested on this occasion, as well as the increased number and improved appearance of the animals and fabrics exhibited, gave sufficient proof, not only of the beneficial influence of this society, but of its permanent establishment. This last quality, viz. permanence, is one that has hitherto been entirely unknown, in all the public societies established for beneficial purposes in this country; but we hope and trust that this society will be the commencement of a new order of things—that it is destined to a longer and more useful life than any of its predecessors. The great number of applications for membership, on this occasion, are proofs that the utility of the society begins to be duly appreciated.

Harvesting.—A general rule, as it regards wheat and rye, is that the earlier each is harvested, and before the grain has become hard, the whiter will be the flour, and the thinner the skin of the grain; but the whole weight of the product will be a little less, than if the grain be harvested later. Probably all that is gained by late harvesting is an addition to the skin of the grain.

When a severe blight or rust has struck wheat or rye, it should be cut immediately, even if the grain be in the milky state; and it should lie on the ground: but not so close as to injure the heads, until such time as the stalks have become dry, and the grain somewhat hardened. Then it ought to be bound up and put in shocks, and carted in as soon as sufficiently dry. The later wheat and rye are cut, however, the easier it will thrash; but at the same time, there is greater waste by the shelling of the grain, in harvesting and carting it in.

Garden Walks.—The following cheap improvement is recommended in the construction of walks in gardens, lawns, &c, uniting the advantages of great hardness, durability, and freedom from worms and insects:—When a new walk is made, or an old one reformed, take the necessary quantity of road scraping, previously dried in the air, and reduced as fine as possible; mix with the heap enough of coal tar from a gas work, so that the whole shall be sufficiently saturated, and then add a quantity of gravel; with this lay rather a thick stratum as a foundation, and then cover it with a thin coating of gravel. In a short time the walk will be as hard as a rock, not affected by wet, or disfiigured by worms.—*County (Eng.) Chronicle.*

A new Lamp.—Doctor Sloane, of Cork, has invented a tallow lamp on an entirely new principle. This lamp, simple in its construction, will burn any kind of tallow, lard, or grease, giving a pure light, and varying in intensity at pleasure, from the dim flare of a chamber rush-light, to the broad glare of the finest gass.—It appears to be peculiarly fitted for shops, manufactories, or dining-rooms, and may be manufactured for the low price of two shillings; but it is at the same time capable of being made an elegant appendage to the drawing-room. This invention promises to do away entirely with the inconvenience arising from the want of pure oil, carelessness of servants spattering of carpets, &c.; being so easily trimmed that a child of ten years old can fit it for burning in three minutes, while it is as portable as any bed-chamber candlestick. When moderately lighted, Dr. Sloane's lamp will give the light of eight mould candles of four to the pound, consuming at the same time only the tallow of four. When reduced to the minimum blaze, the tallow of a farthing rush-light is not consumed. As the inventor intends to apply for a patent, we can tell no more than has been told us respecting this *new light.—Lit. Gaz.*

Patent Mowing Machine.—A machine was exhibited in this town last week, which excited some curiosity, from the novelty of its design; it was an apparatus for mowing by horse power. It consists of an axletree with two wheels, and on the axletree is a drum of smaller dimensions, from which a band extends to the hub of another large vertical wheel, situated in front of the axletree. On the outer edge of this wheel, is placed a succession of scythes, and in front of the whole are the shafts for the horse. When the apparatus is put in motion, as the axle revolves, the band plays from the drum upon the hub of the vertical wheel which is placed upon a pair of thin runners near the ground, and it revolves with astonishing force, levelleng all before it. It requires the most level ground and smooth surface, upon which it is to operate to advantage, and any irregularities of soil, render it almost useless. It will perform the labour of about twenty men in a day, on soil fitted to its operation.—*Northampton, (Eng.) Courier.*

The Malaria.—The bad air of Rome and of the Campagna have, I suspect, been greatly exaggerated. In the latter there seems to be a want of wholesome water; Rome is abundantly supplied, and this is perhaps partly the reason why the city is more wholesome than the country. Another source of disease is to be sought in the nature of the food eaten by the poor.—When a man breakfasts on cucumbers, dines on melons, and sups on love-apples, what has he to support him? In the spring they have, instead of these, purslain, artichokes, and lettuces. Fruit is dearer at Rome than at Bologna, but vegetables are good and plentiful. A lady, last night, was complaining that she could only get fifteen pauls for a cart-load of lettuces, forty-five pauls being equal to a pound sterling. A mass of artichokes, consisting of twenty-six, cost, this spring, two bajoes. They are small, and being boiled till they are soft, are eaten whole. Love-apples have sometimes been sold as low as twelve pounds for a bajoe. Wheaten bread, at the same time, bears about two thirds of the price it does in England. Polenta is cheaper, but the temptation is greater to fill the belly with a food, which, if less wholesome, is more savoury, as well as at a lower price.—*Wood's Letters.*

Excellent Soft Soap.—16 quarts of lye of sufficient strength to bear an egg, 8 lb. of clarified or clean grease, 1½ lbs, of rosin—put the whole into a five pail kettle and boil it. At first it is apt to rise, in which case, add a little strong lye, and so continue to do until the materials are incorporated. Then remove it from the fire and add by degrees weak lye, stirring it at every addition, until the kettle be full.—*N. E. Far.*

Silk Worms.—Jonathan H. Cobb, Esq. of Dedham, is now exhibiting at No. 5, Tremont House, 10,000 silk worms, feeding on Mulberry leaves, together with the eggs, cocoons, the raw silk, and the machine on which it is reeled. These singular little creatures, who furnish half the world with their richest clothing, are in themselves a great curiosity; and they become more so from the conviction that silk must, sooner or later, be a valuable source of wealth in this country. A little more knowledge of the skill and economy used in its manufacture is, we apprehend, all that is now wanting.—*Mass. Jour,*

Large Strawberries —The Fruit committee of the Pennsylvania Horticultural Society, have awarded the premium of a Silver Medal to Mr. Daniel Korchesperger, for the production of the largest and finest strawberries exhibited for the inspection of the Society. They were of the Bourbon species—60 of the largest filling a quart, and measuring four inches round. They were presented by the Society to Mr. Adams, late President of the United States, and to Professor Silliman, of Yale College, at that time on a visit to Philadelphia.

New-York not to be outdone by Pennsylvania!—Mr. Thomas Carpenter, of this village, picked last week a bowl of his garden strawberries, many of which measured more than 4 inches. Mr. Alexander Walsh has also, now in his garden many of the same stock, which are but very little inferior.—*Lansingburg Gaz.*

We have been politely presented by Gen. Wm. H. Sumner, of Dorchester, with a box of the Downton Strawberries of prodigious size, and excellent flavor. Some of the largest measured 5½ inches in circumference, and 60 of them filled a quart measure. Gen. Sumner remarks that he cultivates them *in hills*, in a rich soil, and well supplied with water; and under the leaves, he places, either long green grass, to keep the fruit clean, or slate stones, to hasten their maturity, as has been frequently recommended in the New England Farmer.—*N. E. Farmer.*

Chloride of Lime.—This substance possessing very great disinfecting powers, is of much importance in the sickly and summer months. Tainted meats may be restored by being washed in a solution of it in water; air, rendered impure from sickness, and from offensive effluvia in confined rooms, vesels, and stables, is restored to its purity and healthiness by the chloride of lime. About an ounce should be dissolved in a gallon of water, and the solution left to stand in the infected room, or sprinkled on the floor. This substance can be obtained at almost every apothecary in the city, at from 12½ to 25 cents per pound. The following is an instance of its successful use on board of the Spanish fleet.

On the 11th of July last, the fleet destined for the invasion of Mexico, conveying, in addition to the usual complement of mariners, a large number of soldiers, was overtaken in the Gulf of Mexico by a violent tempest, which continued for several days. The severity of the storm rendered it necessary to remove the windsails, and to close, not only the ports of the lower gun deck, but likewise those of the main deck, and to place on the hatches. In this condition of the ships, with such a crowd of persons confined together, in the middle of summer, within the tropics, without fresh air, putrid fevers and malignant dysenterries soon made their appearance. The air is described as possessing in addition to a highly offensive effluvium, an acrid heat burning to the skin, with a degree of density that arrested respiration and produced giddiness. At this moment of distress and anxiety for the safety of all on board, the chloride was used with the most decided and happy effects. Twelve vessels, containing one ounce each of the chloride of lime, in solution with water, were suspended on the birth deck, four were placed on the orlop deck, and two in the gun room. In the space of two hours the atmosphere lost all its deleterious qualities, and became perfectly agreeable, leaving nothing perceptible but the smell of tar, which always exists more or less in ships. The solutions were renewed every twenty-four hours, but the chloride undissolved at the bottom of the vessels was then sprinkled over the decks, and thrown into such vessels as it became necessary to cleanse. During the whole of the campaign, which lasted three months and a half, the atmosphere was preserved in this pure state by the chloride, to which all the surgeons unite in attributing the few instances of death that occurred in the fleet, when there existed such fruitful sources of fatal disorders.

Brighton Market, Monday, June 28th. At market this day, 430 Beef Cattle, including 150 unsold last week. Unsold at the close of the market 200 viz: 35 Cows and Calves, a few pairs of Working Oxen, about 30 Stores, 995 Sheep and Lambs, 143 Swine.

Prices,—Beef Cattle—Extra, $4 75 a 5, good 4 50 a 4 75, thinner, 3 75 a 4 25.

Cows and Calves—From $14 to 30—about 25 sold.

Working Oxen—No sales noticed.

Sheep and Lambs—$1 25 a 3.

Stores—Sales dull—none noticed.

Swine—Lots of 20 to 50 at 4 a 5 cts: at retail, 4½ a 5½.

The great 'glut' of Cattle at market appears to have been in consequence of large numbers of beautiful Cattle at New-York market from Ohio, causing several drovers destined for that market, to shape their course for Brighton.—*Boston Chronicle.*

Average Price of Vegetables sold at Washington Market, for June 1830 [Corrected for the N. Y. Farmer, by J Matheson, Gardener.]

Cauliflowers, from 6 to 12½ cents per head. *Green peas*, from 37½ to 62½ cts per bushel. *New Potatoes*, from 37½ to 75 cts per bushel. *Old Potatoes*, 37½ cts per bushel. *Cabbage*, from 25 to 75 cts per doz. *Lettuce*, from 6¼ to 12½ cts per doz. *Radishes*, 16 bunches for 12½ cts. *Carrots*, 4 cts per bunch of 8. *Beets*, 4 cts per bunch of 5. *Onions*, from 18 to 24 bunches for 12½ cents. *Water Cress*, 12½ cts per half peck. *Bush Beans*, from 37½ to 62½ cts per bushel. *Turnips*, from 3 to 5 cents per bunch of 10. *Spinach*, 37½ cts per bushel. *Beet-tops*, 18¾ cts per bushel. *Cucumbers*, from 3 to 6¼ cts each. *Squashes*, from 4 to 6¼ cts each. *Strawberries*, from 3 to 4 cts per basket. *Raspberries*, from 3 to 4 cts per basket. *Cherries*, from 4 to 6¼ cts per pound. *Currants*, from 12½ to 18¾ cts per half peck. *Gooseberries*, from 25 to 50 cts per half peck.

Remarks.—Owing to excessive rains, and the unusual coldness of the season, the gardens have been less productive than in former years; that destructive vermin, the grub worm, the green-fly, and many other insects, have made great havoc among the market gardens, but our markets notwithstanding, have been well supplied with all the above articles, and the quality generally good.